DOCUMENT RESUME

ED 036 005 EC 004 828

TITLE A DESIGN FOR A CONTINUUM OF SPECIAL EDUCATION SERVICES INCLUDING A PROPOSAL FOR A PILOT STUDY.
INSTITUTION MARYLAND STATE DEPT. OF EDUCATION, BALTIMORE.
PUB DATE JUN 69
NOTE 125P.

EDRS PRICE EDRS PRICE MF-$0.50 HC-$6.35
DESCRIPTORS ADMINISTRATION, COST EFFECTIVENESS, *EDUCATIONAL PROGRAMS, EVALUATION TECHNIQUES, *EXCEPTIONAL CHILD EDUCATION, FAMILY ENVIRONMENT, *HANDICAPPED CHILDREN, PILOT PROJECTS, PROGRAM COSTS, PROGRAM EVALUATION, PROGRAM PLANNING, *PROGRAM PROPOSALS, QUESTIONNAIRES, RECORDS (FORMS), REGULAR CLASS PLACEMENT, SPECIAL CLASSES, SPECIAL SERVICES, *STATE PROGRAMS, TEACHER ATTITUDES, TESTS
IDENTIFIERS MARYLAND

ABSTRACT

AS A MEANS TO INTEGRATE CHILDREN WITH LEARNING DISABILITIES INTO THE REGULAR CLASS STRUCTURE OF THE SCHOOL, A PLAN HAS BEEN DEVELOPED WHICH WOULD PROVIDE FOR SPECIALIZED SERVICES IN A FLEXIBLE ORGANIZATIONAL PATTERN. A REVISED SYSTEM OF STATE REIMBURSEMENT TO THE LOCAL SCHOOL SYSTEMS IS DESIGNED TO MAINTAIN CHILDREN WITH MILD HANDICAPS IN THE REGULAR CLASSROOM; TECHNIQUES USED FOR THE IMPLEMENTATION ARE GIVEN. THE CONTINUUM OF PROGRAM DESIGN PROVIDES SEVEN PROGRAMS WHICH CAN BE USED ACCORDING TO THE VARIOUS NEEDS OF THE TEACHER AND THE CHILDREN. THE DESIGN OF THE PILOT STUDY IS GIVEN AND DESCRIPTIONS OF THE SPECIFIC TESTS, INSTRUMENTS, AND DIAGNOSTIC TOOLS TO BE USED ARE OUTLINED. APPENDICES CONTAIN DEFINITIONS OF TERMS USED, THE PARENT AND COMMUNITY EDUCATION PROGRAMS, DATA COLLECTION PROCEDURES AND FORMS FOR CHILDREN, TEACHER INTERVIEWS AND A SURVEY, PARENT AND HOME SURVEY, GUIDELINES FOR INFORMAL INTERVIEWS, SCHEDULE FOR PHASING-IN THE PILOT STUDY, COST COMPARISONS BETWEEN THE PRESENT PROGRAM OF SERVICES AND THE CONTINUUM, COST FORMULA, A FRAMEWORK FOR A COST-EFFECTIVENESS ANALYSIS OF THE PILOT STUDY, OVERALL ADMINISTRATION TABLE, RECOMMENDED RESEARCH INSTRUMENTS, AND A BIBLIOGRAPHY. (WW)

ED036005

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DIVISION OF INSTRUCTION
MARYLAND STATE DEPARTMENT OF EDUCATION

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EC004828E

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Revision in process Roz Miller

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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June 30, 1969

ABSTRACT

A plan entitled "A Design for a Continuum of Special Education Services" has been developed by the Maryland State Department of Education. The goal is to establish a revised system of State reimbursement to the local school systems for the education of the handicapped based on a more flexible organizational pattern for special education programs and services. The primary objective is to encourage local educational agencies to maintain children with mild and moderate handicaps in the educational mainstream rather than in self-contained special education classes.

The Continuum organization consists of five programs within the public school framework and two programs for the home-hospital and institutional setting. All programs focus on each child's learning strengths, rather than his weaknesses. When a child is placed in a regular classroom, extensive ancillary services from diagnostic-prescriptive teachers, itinerant and resource room personnel will be available to the child as well as the teacher.

The Continuum has an inherent adaptability for the trend toward non-graded individualized instruction for all children. In an effort to meet the crucial manpower shortage, this program is designed to provide services to more handicapped children at a lesser cost per child through the deployment and improved utilization of highly specialized professional personnel. This plan also emphasizes prevention of learning handicaps through a system of early identification and diagnosis.

Initially, the Continuum will be introduced on a pilot basis in several school districts. During the pilot study, testing procedures, evaluation instruments, administrative procedures, and cost analysis measures will be developed so that the effectiveness of this organizational pattern can be determined.

ACKNOWLEDGEMENTS

The development of this proposal, "A Design for a Continuum of Special Education Services," has been dependent upon the skill, enthusiasm, and commitment of many professional personnel over a one-year period. The following committees have been active in studying and developing a more equitable means of disbursing State aid, and in developing a plan to provide quality programs for more handicapped children at a lower per pupil cost.

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I. INTRODUCTION

The Department of Special Education of the State of Maryland has developed a new plan for serving children with learning disabilities. In general, the focus of the program is to integrate these children in the regular class structure of the school, while providing special services as needed.

The plan calls for initiating this new program on a pilot basis in several school districts.

The purpose of this project is to design methods and techniques for evaluating the effectiveness of this new approach; the end product of this study is to achieve the following:

1. Develop the specific criteria to evaluate the effectiveness of the pilot studies.
2. Develop and/or identify the tests, instruments, etc., to be used in evaluating the pilot project. These tests, instruments, etc., may be used for teachers, children, administrators, supervisors, parents, etc.
3. Develop and/or identify the methods and techniques to use in administrative analyses, program evaluation, site visits, local reporting systems, etc.
4. Develop the expected outcomes based on the stated objectives for the "Continuum for Program Design."
5. Indicate the procedures for phasing-in and starting the project.
6. Design and justify all samples to be used in the study.
7. Describe the methods and techniques (questionnaire analysis, case study analysis, content analysis, cost-effectiveness analysis, etc.) to be used.
8. Describe the materials to be used for the project--promotional materials, questionnaires, explanatory materials, etc.

Educational institutions in our country have become concerned over the types of programs provided for exceptional children. There is a feeling that the present system of organization of special classes for handicapped, retarded, emotionally disturbed, etc., is not meeting the needs of those children. Children placed in those classes become stereotyped. They remain in those classes throughout their school experience. They are segregated from the mainstream of the child population and do not have an opportunity to work with the other children in the school. While programs in the special classes provide opportunities for these children to learn at their own pace in relation to their specific disability, their overall development and growth is limited from the point of view of a total educational experience. They develop a sense of inadequacy and they are often marked as "different" by the other children in the school and by the teachers. The rigidity of the system does not provide for the greatest fulfillment to their maximum potential.

This plan--The Continuum of Program Design--encompasses the following features:

1. It focuses on learning difficulties rather than on traditional approaches of dealing with separate physical, emotional and other particularized disabilities.

2. It provides for maintaining the child in the regular class rather than segregating him into special classes, except where it is unavoidable or necessary for a short period of time.

3. It provides specialized services in a flexible manner and on an individual basis as needed.

4. By and large, it eliminates the stigmatization of the child with learning difficulties, both by his peers and by the teachers.

5. It provides for the maximum use of specialized staff.

6. It provides opportunities for the regular classroom teacher to identify and diagnose children with learning disabilities early and provides him with support for working with the children to overcome these learning disabilities.

II. PHILOSOPHY AND RATIONALE

A. The Problem

In recent years, there has been considerable progress in special education.[1] Increasingly, the emphasis is on making education special for all children and departing from the concept that special education is something distinct from the total school program. General education is developing more individualized instructional programs. R. Louis Bright,[2] Associate Commissioner for Research, U. S. Office of Education, noted that within another ten years almost the entire academic portion of instruction will be on an individual basis in most schools. The concept of individual differences, which has been accepted by general education, stemmed from the fact that exceptional children did not fit into the earlier patterns of education which have been established for the normal child. (An example is the Oakleaf Project, Pittsburgh, Pennsylvania). Large numbers of children categorized as "different" may now be placed in the regular classroom, rather than in isolated special education programs.

According to estimates by the United States Office of Education, the number of children in need of special programs and services are more than double the number receiving these services. Nationally there are 5-1/2 million identified handicapped children. Of this number, only about 2-1/2 million are receiving special education services. In Maryland, while there are approximately 45,000 exceptional children and youth enrolled in special education programs, studies indicate that a much larger percentage of handicapped children are not receiving services. Educators can ill afford to postpone appropriate action. If our goal is to provide educational experiences that will enable each child to realize a full and useful life in accordance with his capacity, then efforts must be made to alleviate the discrepancy between those who receive services.

Some of the most pressing problems which need to be critically examined and resolved are corroborated by various studies. This proposal summarizes some of the critical problems and suggested resolutions on which action must be taken if Maryland is to keep pace with national trends.

Dr. James J. Gallagher, U. S. Office of Education pointed out some of the most pressing problems facing special educators today. Some of the critical issues mentioned by Dr. Gallagher to which this program design addresses itself are:

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[1] By special education, we mean programs designed for pupils with significant learning problems because of (1) behavioral disabilities; (2) communicative disabilities; (3) mental limitations; or (4) physical disabilities. Children are referred to special education programs as a result of teacher's observations and educational medical and psychological examinations. The length of a pupil's stay in the program depends upon the nature of the problem. For some, the stay is brief; for others it extends throughout the elementary and secondary grades.

[2] R. Louis Bright. "The Time Is Now," American Education. Washington, D. C.: Office of Education, U. S. Department of Health, Education and Welfare. 3:13. (Nov. 1967.)

> "The way in which special education programs have traditionally been organized has not allowed us to provide a continuum of services particularly in rural and inner-city areas. State funding practices have not encouraged the development of a continuum of services.
>
> "A strong desire to move away from etiological categories and adopt a kind of educational-remedial model for the handicapped.
>
> "A need to train a wider variety of specialists to meet the need for many different roles in the special education program for the future. Certification standards require revision." [3]

A study conducted by Frank Hodgson[4] indicates that there exists inconclusive evidence of major trends or professional agreement relative to the best type of program organization or design to serve exceptional children. Some of the major problems mentioned by Dr. Gallagher perhaps stem from this lack of an organizational scheme within the public school system to facilitate flexible program designs to attract the child toward progressive levels of independence. State funding laws and financing of special education programs also prohibit a flexible organization relative to pupil placement practices, instructional resources, ancillary personnel, and services as needed.

Programs for handicapped children have evolved over the years in a piecemeal fashion at Federal, State, and local levels. In order to achieve the goal of the child's optimum education and rehabilitation, Willenberg[5] claims there is ample experience to support various forms of centralized units to provide planning, development, and coordination of special education. The basic unit for educational service is the individual exceptional child.

If we accept the philosophy that exceptional children should not be separated from their peers except where their particular needs make it necessary, bringing these children into the mainstream of life makes good educational sense. Whenever possible and appropriate, these children should be with their peers. Segregating handicapped youngsters robs them of opportunities for social growth and deprives the more fortunate children of a chance to interact responsibly.

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[3] James J. Gallagher, "Federal-State Planning," (An address made at a meeting of State Directors of Special Education, U. S. Department of Health, Education and Welfare, Washington, D. C., November 21, 1968.) p. 4.

[4] Frank M. Hodgson. "Special Education--Facts and Attitudes," Exceptional Children. Washington, D. C.: Council for Exceptional Children. 30:196-201. (Jan. 1964.)

[5] E. P. Willenberg. "Critical Issues in Special Education: Internal Organization," Exceptional Children. Washington, D. C.: Council for Exceptional Children. 33:551-2. (March 1967.)

Thus, according to Mackie,[6] Dunn,[7] Gallagher[8] and others, much special education as we have traditionally known it is in need of change. With the change in the total school structure as it is now evolving (pre-school programs, the ungraded primary, the middle-school concept, flexible scheduling of high school classes, the "free-learner" concept, instructional television, teaching machines, programmed materials, and all other aspects of instructional media), it is proposed that many students formerly relegated to various special education classes can become active participants in the regular school program.

Many exceptional children require little modification of the regular school program and instructional procedures, while others for various reasons, require more intense modification in content and instruction with specialized programs requiring differential placement and methods of teaching.

Within the framework of this philosophy and rationale, the Maryland State Deaprtment of Education has designed a continuum of special programs and services for exceptional children.

B. The Continuum of Program Design

Under the proposed Continuum of Program Design, the exceptional child will receive whatever specialized service he needs while retaining affiliation with the regular classroom, except for those whose learning problems are so severe that they cannot benefit from regular classroom instruction and, therefore, need the services designed for the self-contained classroom or non-public school placement. The Continuum of Program Design not only provides a more flexible organization to meet varying needs, but also allows for movement along the continuum. For example, as the program identifies as well as remediates a child's learning difficulties, he can move along the continuum to a program providing less supportive services and more identification with children in the regular school classes. Not only is this plan beneficial to the child, but it reduces the financial cost of his education.

With a flexible system of organization, the school can provide adequate services to match the changing needs of exceptional children throughout their school life, beginning in the pre-school years. The inclusion of programs for all pre-school children is receiving widespread interest. The State Department of Education bulletin, Early Childhood Education - A Basic Plan[9] states that research studies indicate that the environment of the early years has lasting effects upon the individual's intelligence, personality, and physical and mental health.

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[6] R. P. Mackie and E. Cohoe. Teachers of Children Who Are Partially Sighted. (Office of Education Bulletin No. 4, Washington, D. C.: U. S. Government Printing Office. 1956.)

[7] L. M. Dunn. "Is Much Of Special Education (as we have known it) Obsolete?" (A paper presented at the 18th Annual Convention of the Illinois Council for Exceptional Children, Chicago, October 14, 1967.)

[8] Gallagher. op.cit.

[9] Early Childhood Education - A Basic Plan. Education Series #1. Baltimore, Maryland: State Department of Education. April 1967.

Some of the more significant factors which Bloom[10/] identifies as affecting intelligence are: language experiences, opportunities to solve problems, and interaction between children and adults. The research of many other psychologists reinforces Bloom's conclusions; for example, Hunt,[11/] in his research regarding intelligence and experiences suggests that the early years are crucial in the development of the ability to think and generalize; Jersild[12/] and Wann[13/] emphasize the importance of early experiences in the intellectual development of children; Piaget's[14/] monumental research over the past thirty years indicates that the thought processes comprising intelligence are continually changing as a consequence of a person's encounters with his environment. Kirk[15/] has demonstrated that pre-school experiences which promote understanding and wide use of language result in "greater success in the later years in school."

The Continuum of Program Design contains seven programs which are related to the various needs of the teacher and the children.[16/]

1. Program I

This program includes adjunctive services, the function of which will be to provide counseling and assessment, as well as a liaison with parents and community services. The program will serve pupils in the public schools who do not need major curricular adjustment, but who need some form of consultative service in order to help them function more effectively in the classroom and in the community. In this program, additional staff will perform essential functions both for the teacher and the children. The staff will include psychologists, pupil personnel workers, public health nurses, and counselors. These supportive personnel will serve as consultants to classroom teachers, and will be available for assistance when any child has a special need which may affect his learning or his ability to learn. The supportive personnel will also provide specialized materials that the teacher may use with the child who needs additional help in the classroom. It will provide opportunities for the assessment of children's needs, counseling, and liaison with parents and community services.

2. Program II

This program provides diagnostic and prescriptive services and will be established to educationally assess children referred by the regular classroom

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[10/] Benjamin S. Bloom. Stability and Change In Human Characteristics. (New York: John Wiley and Sons, Inc., 1964.)

[11/] Joseph McV. Hunt. Intelligence and Experience. (New York: The Ronald Press Co., 1961.)

[12/] Arthur T. Jersild. Child Psychology. (5th edition. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1960.)

[13/] Kenneth Wann, et.al. Fostering Intellectual Development in Young Children. (New York: Bureau of Publications, Teachers College, Columbia University, 1962.)

[14/] Jean Piaget. The Child's Concept of the World. (4th edition, Translated by Joan and Andrew Tomlinson, London: Routledge and Kegan Paul, Ltd., 1964.)

[15/] S. A. Kirk. Educating Exceptional Children. (Boston, Massachusetts: Houghton Mifflin Company, 1962.) Chapters 8 and 19, pp. 196-241.

[16/] Pages 15 to 19 describe the programs in chart form.

teacher and/or ancillary personnel as outlined in Program I. It focuses on the child who has the potential for achieving in the regular classroom setting, but for some unknown reason is not achieving up to his potential. The purpose of this program is to identify as early as possible the areas of difficulty a child is exhibiting and prescribe an educational program for the child in order to facilitate learning through remediation.

The teacher assigned to Program II will be placed in an established resource room and assume the responsibilities of a diagnostic teacher. She will administer educational tests and/or observe those children referred by the regular classroom teacher or supportive personnel. Her responsibilities to the regular classroom teacher will also include:

a. The development and interpretation of learning profiles to indicate childrens' strengths and weaknesses.

b. The preparation of materials for remediation.

c. The demonstration of the use of these materials to the regular teacher.

d. Follow through with regular classroom teachers when the child is referred back to the regular class.

3. Program III

This program uses an itinerant teacher. The plan is to provide individual and/or group services to children in a regular classroom setting. The aim is to use the itinerant teacher to supplement the regular classroom teacher. The itinerant program allows children with visual handicaps, hearing and speech problems to remain in their home school and environment and receive the bulk of their education with their peers. Those students with mild visual handicaps and hearing and speech impairments will be provided supportive services such as special instruction, supervision, special materials, and counseling. This might include learning to read and write braille, learning to type on a special braille typewriter, special adjustment to physical and social environment when necessary, and special materials such as large print books, audio aids, tangible aids, and other aids. The supportive services for children with speech and hearing difficulties will include programs to deal with disorders of articulation voice, language, symbolization and rhythm, and other speech disorders.

4. Program IV

This provides for a cooperative, regular resource room. This program places more emphasis on the prescriptive teacher. It addresses itself to more intensive programs of intervention, where the child spends a part of the day in the cooperative resource room, but is enrolled in a regular classroom where he spends the major portion of his day with his peers.

Under this proposed program design, an emotionally handicapped child, a learning disability child, or an educationally retarded child may be grouped together in this room if their learning profiles indicate similar learning patterns. The child is scheduled for the cooperative resource room until his particular problem has been minimized. He may then be transferred to the diagnostic and prescriptive teaching program or may be transferred back on a full-time basis to the regular classroom from which he was referred. The child may spend one, two, or three periods a day in this cooperative resource room. The child will receive intensive tutorial services and diagnostic prescriptive teaching techniques, all of which will supplement the curriculum of the regular classroom.

This program is designed for those pupils who exhibit a functional disorder in one or more academic areas or in the social or emotional skills. Emphasis is placed on grouping by educational remedial component, rather than by grouping by categorical label. The program will be of a flexible nature so that some pupils may be transferred to other programs while some will remain in a self-contained special class throughout their school years.

Selection for placement in this program should be governed within the limits of mental maturation and acquisition of skills, by the chronological and physical maturity of the individual, since the grouping will insure some general homogeneity, in both present general learning potential, as well as in general life experiences. Other factors would include such items as physical or sensory handicaps and special problems in emotional and social adjustment.

The special curriculum should provide pre-school preparation in activities in daily living, training in basic readiness skills, personal social skills and remediation in the academic subjects where applicable. Adequate opportunities for learning of conceptual and social skills should be provided for these children so that they may become contributing members of society.

5. Program V

This program establishes special education classes for those severely handicapped children who need a total modification in curriculum since they are unable to function for even short periods of time in the regular classroom. It is the self-contained class now in existence throughout public school education. Even though many of these children will need a sheltered environment throughout their lives, they should be considered a part of the total school and participate in spectator school activities wherever feasible. This implies that the program for them should be located in a regular school.

This group comprises a multiplicity of categories of handicapped children. The program may include a variety of phases, taking into account physical and intellectual capabilities as well as psychological and social maturity.

6. Program VI[17]

A child should be referred to a special day school when he is unable to adjust to the school environment whether enrolled in special education or the regular program. The special day school program will provide specialized equipment, treatment services and education focused on the special needs of the child.

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[17] This pilot or field test of the Continuum does not include Program VI or Program VII. These are excluded because they occur outside the public school environment where Programs I through V are concentrated.

Selection of students for this program should include a total interdisciplinary assessment, including the written consent of the child's parents. Only those students who meet the rigid standards of a well-developed selection policy should attend a special school. Thoughtful educators always must ask themselves an important question: Can the special school realistically meet the needs of this child which would remain unmet in any other type of situation? An affirmative answer thoughtfully given will result in a special school which operates in the best of contemporary educational philosophy.

The advantages and disadvantages of the special day school must be enumerated.

Advantages:

1. The community special school keeps the child in his own home and in association with his parents and family.
2. The private special day school can provide services of many specialties. The specialties of the medical profession, psychological services, and the facilities of community agencies can be mustered and organized into an effective habilitation program.

Disadvantages:

1. Infrequent contact of youngsters with normal peers.
2. Transportation problems might eliminate the possibility of a private special day school placement.

7. Program VII

The purpose of educational programs in State residential institutions is to provide placement and/or treatment to children and young adults who are either committed as criminals or delinquents according to the appropriate laws of the State of Maryland (Article 1, Article 26, Article 27, of the Public Laws of Maryland), or who are committed to a state department of mental hygiene (Act 59 of Public Laws of Maryland).

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For children and young adults so ~~committed~~ placed, educational programs are provided to meet their educational needs. Such programs include education of the deaf, visually handicapped, severely retarded, emotionally disturbed, and socially maladjusted and also language development, speech therapy, vocational education, and vocational rehabilitation.

The personnel within the state or private institution would hopefully include diagnostic prescriptive teachers, medical and psychiatric services, speech pathology and audiology, and psychological and counseling services.

C. Financial and Professional Incentive

State laws and funding practices of special education programs have in the past curtailed the provision of a flexible organization of programs relative to pupil placement practices, instructional resources, ancillary personnel and flexible services. Funds have been allocated on a pupil basis by label or handicap, i.e., mentally retarded, emotionally handicapped, specific learning disability, etc. State funds have been available for children placed in self-contained special classes. When local school systems have been unable to provide local funds to finance other types of programs, their only choice has been special class placement. This practice has contributed to the shortage of professional personnel and to the inappropriate placement of many handicapped children. It also has prevented the development of programs and services for the identified exceptional children who are not receiving these services.

The disbursement of State aid under the proposed continuum will be based on a pupil-program design weighing basis. This method of funding would disregard the labeling by handicap and place the emphasis on the learning need, thus, enabling the local school systems to receive funds on the basis of the method of intervention or program in which the child is enrolled. This program design will meet the requirements of mandated legislation affecting all handicapped children throughout the State of Maryland. This would provide a financial incentive to local units to provide various types of programs and services; the average cost per pupil would be lowered and the saving in cost could be utilized to serve a greater number of children.

The proposed plan would provide Federal funds for the training and retraining of professional personnel, thus enabling teachers and other professional personnel to enhance their skills and provide a higher quality of education for the exceptional child. In addition to Federal resources available for the training of teachers, the state has indicated its commitment by providing teacher training institutes which will cooperate in the training and retraining of personnel.

There is an additional item that relates to professional functions. The continuum makes clear that the initial identification of children is made by the classroom teacher. This is important because the theoretical orientation of the professional will have a strong impact on the nature of the intervention process and the classroom teacher is more apt to see the problem in terms of learning.

D. Categorical Labeling

Gallagher[18/] stated that there should be a major effort to move away from etiological categories of exceptional children. These are the children who have been labeled mentally retarded, socially maladjusted, emotionally handicapped, brain damaged, etc. This clinical classification does not prescribe teaching methodology, often distorts the learning potential of the child, and frequently creates a negative teacher attitude.

[18/] Gallagher. op.cit.

Combs and Harper[19/] investigated the effects of labels on attitudes of educators toward exceptional children. The results of this study indicate that labels like "mentally retarded" and "Cerebral Palsied" do affect the attitudes of teachers toward exceptional children. The implication that labels create varying effects on the attitudes of professional people would raise the question about how attitudes of the lay public and the child's peers are affected.

Dedication to the special class concept has proliferated the labeling practice without evidence to substantiate its usefulness in education. The professional feeling is that in the areas of the mildly retarded and emotionally handicapped, the self-contained classroom is not as effective in academic achievement and behavioral change variables than other types of placement with supporting services to teachers, i.e., resource rooms, itinerant services, special supporting help to the teacher in the regular classroom. The self-contained classroom with its isolation component has not provided educators with evidence to substantiate its usefulness for all handicapped children. Many handicapped children with near normal and above normal intelligence possess learning disabilities in varying degrees that require either remediation in one or two academic subjects or intervention in the social and emotional components of psychoeducational planning.

Dunn[20/] estimates that 60% to 80% of the children now placed in special education classes for the mildly retarded come from families with low status backgrounds and from broken, disorganized and inadequate homes. These estimates suggest that the majority of these children are classified as mentally retarded and are placed in these classes because of educational handicaps and/or inadequate test measurements.

The proposed Continuum of Program Design will provide appropriate placement and services for the majority of those children previously designated as "mildly mentally retarded" or as possessing mild and moderate learning disabilities. These children would re-enter the mainstream of regular school classes as they progress educationally, socially, and emotionally and would eventually be able to take their places as contributing members of society minus labels. It is logical to assume that early identification and adequate programming would result in a decrease in physical and emotional disorders among children and adults, a decline in the number of self-contained special classes, a reduction in learning impairments, and a decline in the number of school dropouts.

It is also logical to assume that the ancillary services provided the regular classroom teacher and other staff members would improve instructional techniques and strategies to strengthen intellectual, social, emotional and physical capabilities of all children and youth.

[19/] R. Combs and J. Harper. "Effects of Labels on Attitudes of Educators Toward Handicapped Children." Exceptional Children. Washington, D. C.: Council for Exceptional Children. 33:6. (March 1967.)

[20/] L. M. Dunn. "Special Education for the Mildly Retarded - Is Much of It Justifiable?" Exceptional Children. Washington, D. C.: Council for Exceptional Children. Volume 39. (Sept. 1968.)

E. Manpower Crisis

The proliferation of self-contained special classes has created a manpower crisis. According to the U. S. Office of Education,

> "If we project our present training efforts with the existing level of State and other training supports, then there are some areas of the handicapped in which, by any reasonable projections, we will never reach a solution to our manpower needs."[21]

The trend away from the categorical labeling which will come with new legislation and Federal funding for professional training will help to resolve the manpower shortage if other types of program organization are accepted and implemented.

The proposed Continuum of Program Design would release many trained teachers who are now assigned to special classes and they would be available for retraining for the new programs; the reorganization pattern and re-evaluation process would allow various programs to absorb children previously placed in special classes and would provide placement for more children than would be permitted in special classes thus requiring fewer trained personnel. Experimentation with the various programs would produce much needed information and the tools by which we may answer the manpower crisis questions with a more refined approach.[22]

Colleges and universities in the Baltimore and Washington metropolitan areas have agreed to help train and retrain personnel on a consortium basis if this proposal is approved (letters of intent are needed). Students would receive course credit from universities and colleges of their choice. Certification credit would be granted by the State Department of Education. This cooperative arrangement between the State Department of Education and higher education would meld splintered efforts and patch up deficiencies in training and retraining personnel for a comprehensive program design in special education for the future.

F. Aims and Purposes of the Continuum

The most general purpose of the continuum is to provide a more effective delivery system in terms of numbers reached, the quality of education, and cost. It has these specific aims: the extent to which they can be realized will be determined by the pilot test.

1. For the children: the program should produce a more effective, comprehensive, and earlier diagnosis of learning needs and quicker assistance. And perhaps most important, the program should provide a better personal and social climate. Specifically,

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[21] Gallagher. op.cit. p. 13.

[22] It has been noted that although the Federal government has supported training programs for handicapped children, a wide gap continues to exist between the number of trained teachers and the number of teachers needed to staff existing programs. (Report of National Advisory Committee on Handicapped Children 1968.)

for children, the program will aim at the following.

a. Early diagnosis of learning difficulties will be stressed.

b. Individualized assistance in overcoming difficulties will be provided.

c. The child will develop an improved positive self-image by the elimination of stigmatization and enhancing independence.

d. The child will be able to participate in the regular class in as short a time as possible.

e. The child's relationship with his peers and family will improve.

f. The child will learn to function to his maximum capacity while understanding and accepting his handicap, where there is a specific physical disability.

2. In Terms of the Teaching Personnel: In terms of teaching staff, the instructional process should be better organized and teachers should be better utilized and better able to understand the children.

a. The teacher will learn basic mental health concepts which can be applied in the classroom.

b. The teacher will develop or improve his diagnostic skills.

c. The teacher will learn to make better use of supportive services.

d. The special education staff will learn how to work more effectively with the classroom teacher.

e. The special education staff will learn how to function in an integrative collaborative manner.

f. The teaching personnel will function more flexibly with children.

3. In Terms of the Parents and the Community: This program should produce greater understanding between parents and the general community, including a closer relationship between the parents and the schools.

a. The parents will demonstrate a more positive understanding attitude to children with learning difficulties.

b. They will have a better understanding of the school's program for children with learning difficulties and will reinforce those activities at home.

c. The parent will learn to create an atmosphere in the home so that other children will develop appropriate relationships to children with learning difficulties.

    d. The community will gain a greater appreciation and understanding of children with learning difficulties and handicaps.

4. In Terms of the School: The schools should be able to provide a more effective delivery of services and improved understanding of the needs of the children.

    a. The school will operate more flexibly in organizing services for children with learning difficulties.

    b. The school will continually re-examine its organizational structure for improved services to both regular students and students with learning difficulties.

    c. The staff will re-examine the personnel structure for more effective and efficient use of personnel.

    d. The school will re-examine the financing base for education as it relates to special education, in order to achieve the maximum for the dollar spent.

    e. The staff will examine the potential use of paraprofessionals in the school system, particularly in reference to special education.

    f. The school personnel will gain insight into the problems and techniques of developing appropriate research and evaluation methods.

TABLE I.

CONTINUUM OF PROGRAM DESIGN: FUNCTIONAL PLAN CHART

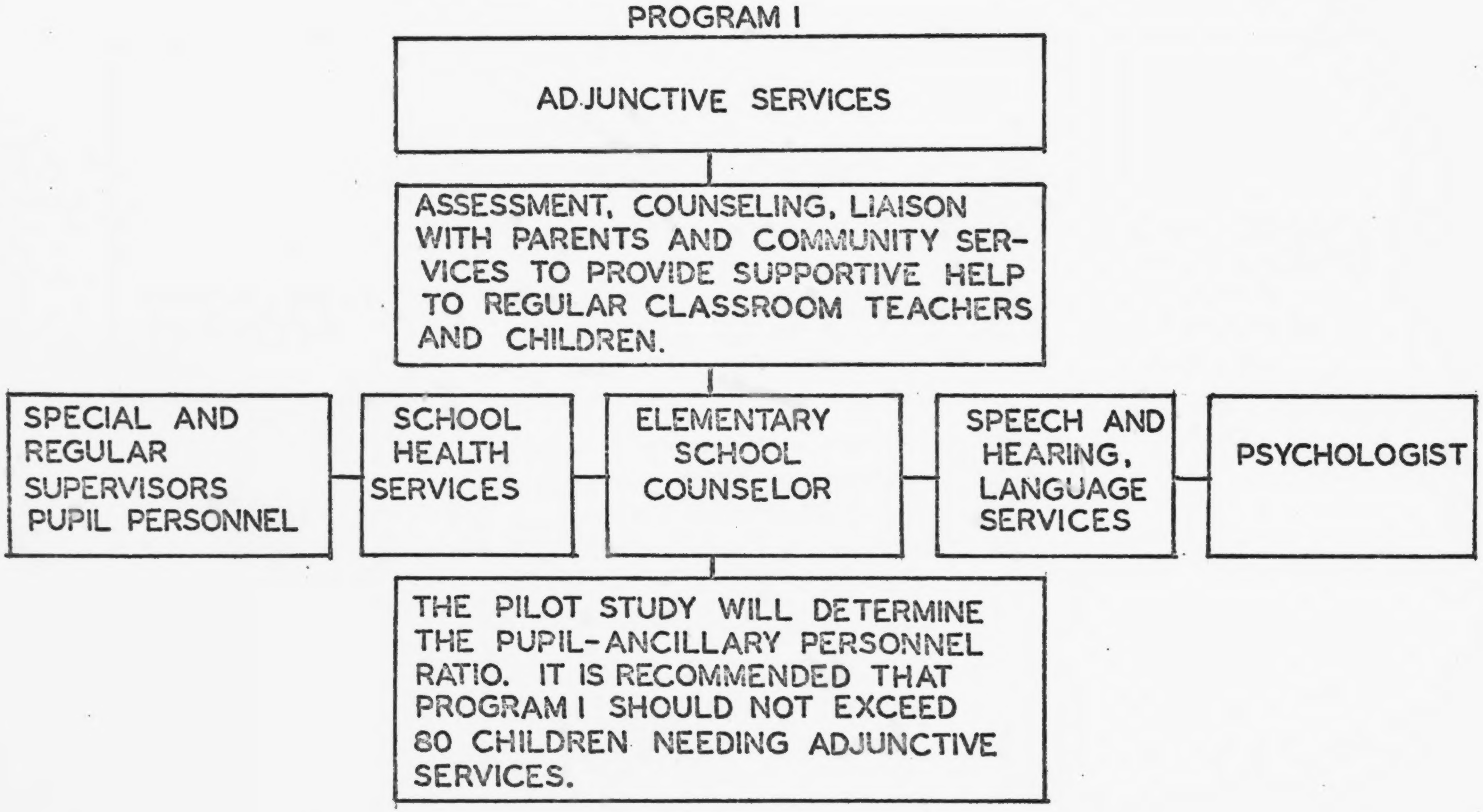

PROGRAM I
ADJUNCTIVE SERVICES
ASSESSMENT, COUNSELING, LIAISON WITH PARENTS AND COMMUNITY SERVICES TO PROVIDE SUPPORTIVE HELP TO REGULAR CLASSROOM TEACHERS AND CHILDREN.
SPECIAL AND REGULAR SUPERVISORS PUPIL PERSONNEL
SCHOOL HEALTH SERVICES
ELEMENTARY SCHOOL COUNSELOR
SPEECH AND HEARING, LANGUAGE SERVICES
PSYCHOLOGIST
THE PILOT STUDY WILL DETERMINE THE PUPIL-ANCILLARY PERSONNEL RATIO. IT IS RECOMMENDED THAT PROGRAM I SHOULD NOT EXCEED 80 CHILDREN NEEDING ADJUNCTIVE SERVICES.

TABLE II.

PROGRAM II

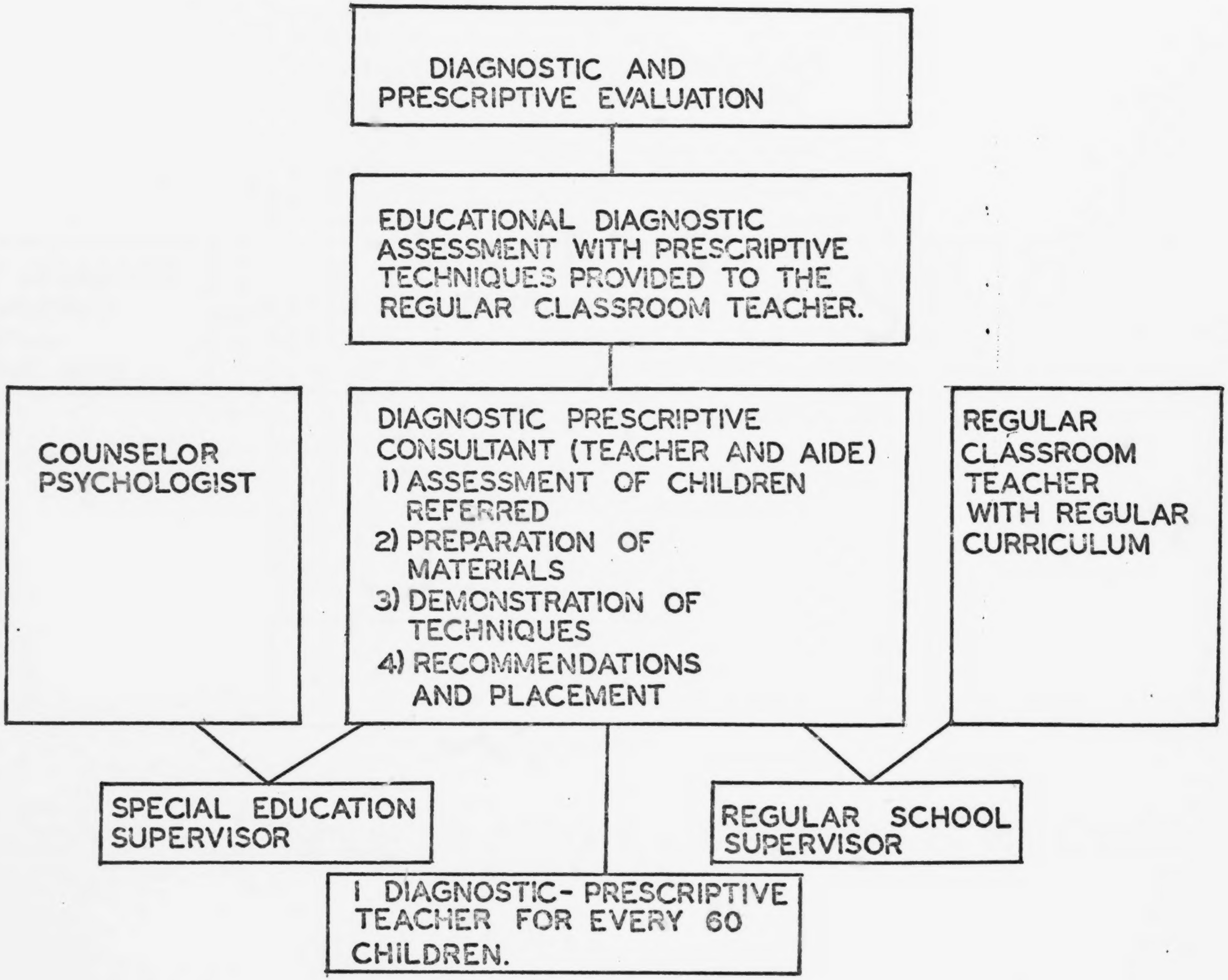

DIAGNOSTIC AND PRESCRIPTIVE EVALUATION
EDUCATIONAL DIAGNOSTIC ASSESSMENT WITH PRESCRIPTIVE TECHNIQUES PROVIDED TO THE REGULAR CLASSROOM TEACHER.
COUNSELOR PSYCHOLOGIST
DIAGNOSTIC PRESCRIPTIVE CONSULTANT (TEACHER AND AIDE)
1) ASSESSMENT OF CHILDREN REFERRED
2) PREPARATION OF MATERIALS
3) DEMONSTRATION OF TECHNIQUES
4) RECOMMENDATIONS AND PLACEMENT
REGULAR CLASSROOM TEACHER WITH REGULAR CURRICULUM
SPECIAL EDUCATION SUPERVISOR
REGULAR SCHOOL SUPERVISOR
1 DIAGNOSTIC- PRESCRIPTIVE TEACHER FOR EVERY 60 CHILDREN.

TABLE III.

PROGRAM III

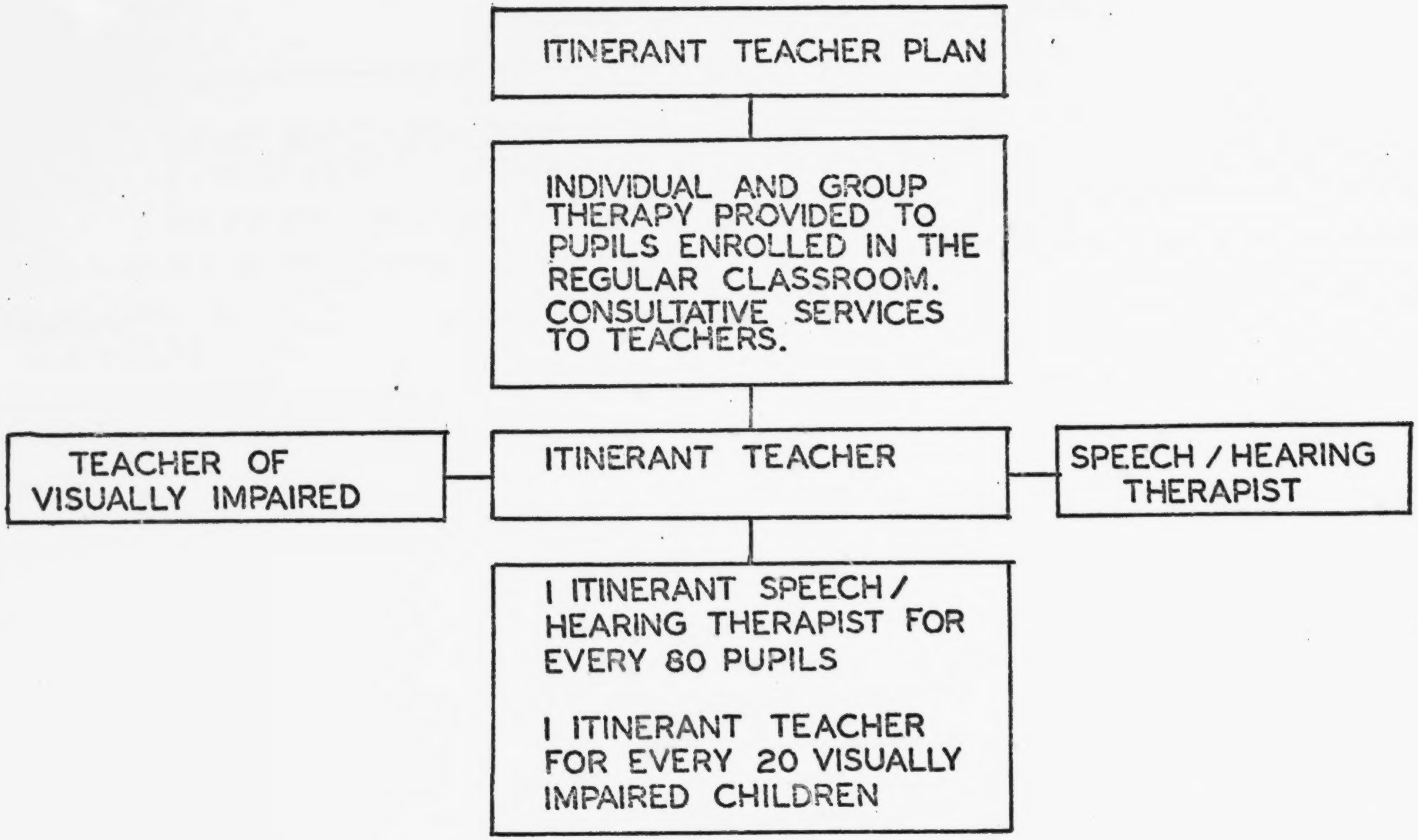

ITINERANT TEACHER PLAN
INDIVIDUAL AND GROUP THERAPY PROVIDED TO PUPILS ENROLLED IN THE REGULAR CLASSROOM. CONSULTATIVE SERVICES TO TEACHERS.
TEACHER OF VISUALLY IMPAIRED
ITINERANT TEACHER
SPEECH / HEARING THERAPIST
I ITINERANT SPEECH / HEARING THERAPIST FOR EVERY 80 PUPILS
I ITINERANT TEACHER FOR EVERY 20 VISUALLY IMPAIRED CHILDREN

TABLE IV.

PROGRAM IV

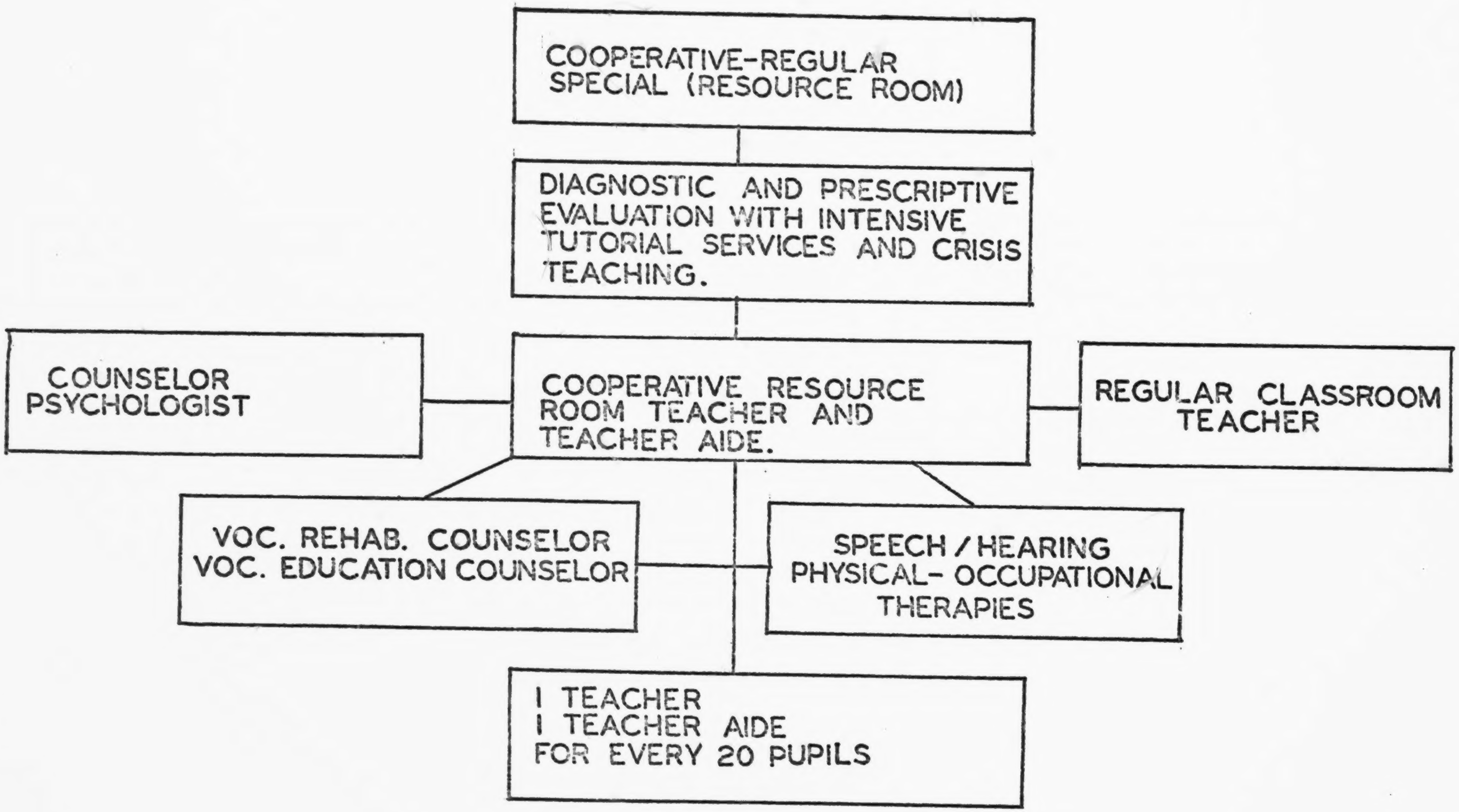
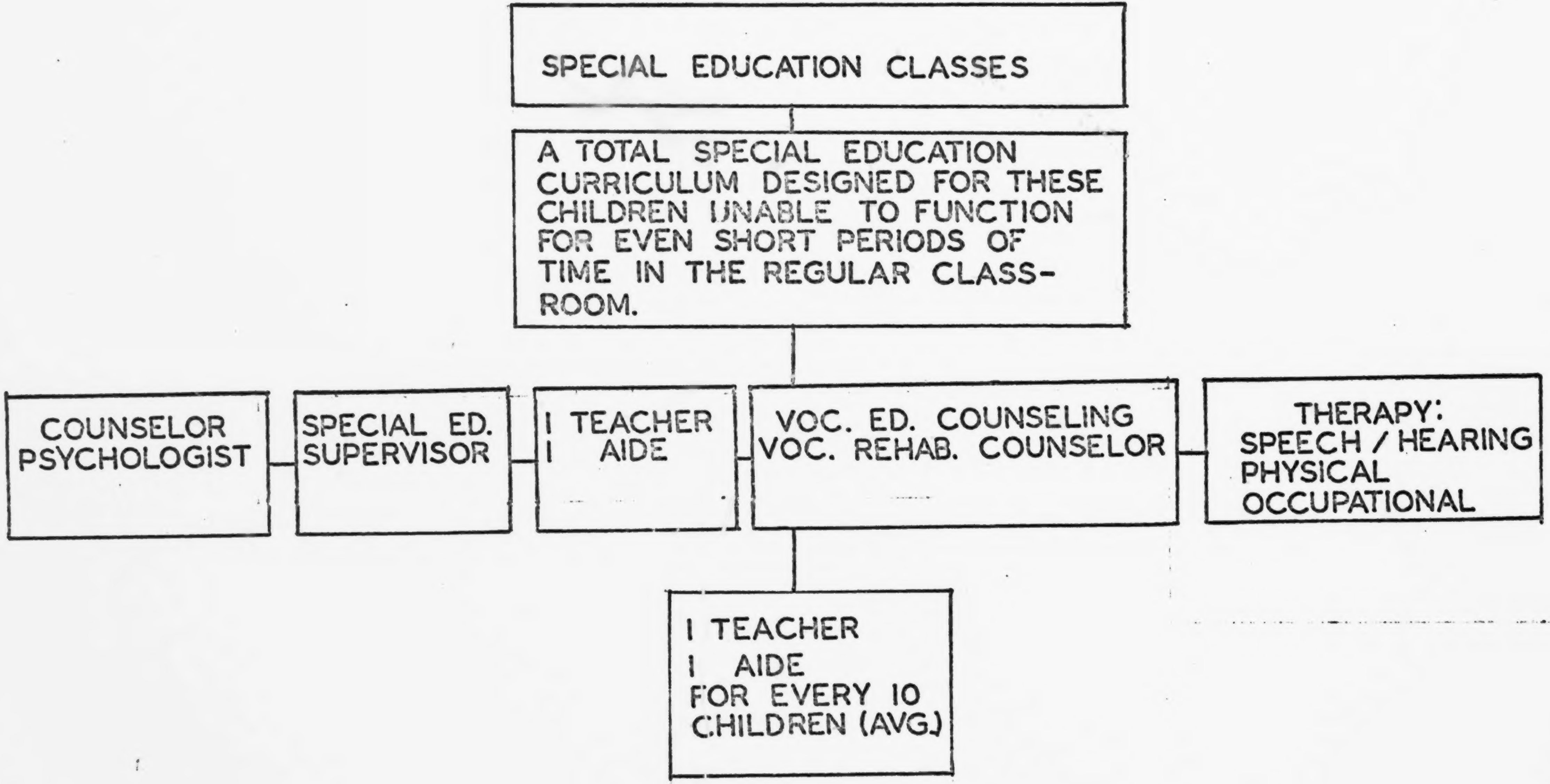

COOPERATIVE-REGULAR SPECIAL (RESOURCE ROOM)
DIAGNOSTIC AND PRESCRIPTIVE EVALUATION WITH INTENSIVE TUTORIAL SERVICES AND CRISIS TEACHING.
COUNSELOR PSYCHOLOGIST
COOPERATIVE RESOURCE ROOM TEACHER AND TEACHER AIDE.
REGULAR CLASSROOM TEACHER
VOC. REHAB. COUNSELOR VOC. EDUCATION COUNSELOR
SPEECH / HEARING PHYSICAL- OCCUPATIONAL THERAPIES
I TEACHER I TEACHER AIDE FOR EVERY 20 PUPILS

TABLE V.

PROGRAM V


SPECIAL EDUCATION CLASSES
A TOTAL SPECIAL EDUCATION CURRICULUM DESIGNED FOR THESE CHILDREN UNABLE TO FUNCTION FOR EVEN SHORT PERIODS OF TIME IN THE REGULAR CLASSROOM.
COUNSELOR
PSYCHOLOGIST
SPECIAL ED.
SUPERVISOR
1 TEACHER
1 AIDE
VOC. ED. COUNSELING
VOC. REHAB. COUNSELOR
THERAPY:
SPEECH / HEARING
PHYSICAL
OCCUPATIONAL
1 TEACHER
1 AIDE
FOR EVERY 10
CHILDREN (AVG.)

III. THE RESEARCH DESIGN

A. General Procedures

The Maryland Department of Education is planning to test this new approach in special education through a pilot project involving control groups. The Department is, therefore, understandably desirous of developing methods and techniques for evaluation.

The strategy and overriding purpose of this project is, therefore, to identify the effectiveness of the pilot programs in terms of their impact on students, parents, school personnel, and the community to identify the effectiveness of the various components, and to specify the pattern of this effectiveness.

In reviewing the kinds of data needed for such an evaluation, the following factors should be taken into consideration.

1. The data should give some indication of the growth and development of the programs, the factors that influenced this growth and development, and how people, processes and institutions have been changed and/or have accommodated the programs.

2. The evaluation should give some indication of the operation of the programs. It should describe a "process model," which would give those interested in this study an indication of what might be duplicated and what contribution various features of the program make to the overall project.

3. The evaluations should indicate how the various components of the project relate to each other and the consequences for reducing, increasing, and/or changing one component in terms of its impact upon the project as a whole.

4. The evaluation should indicate the extent to which certain features can be disseminated and the manner in which this can be done.

5. The evaluation should be able to measure the outcome of the educational programs and relate these to administrative procedures.

This chapter contains the design of the pilot study; that is, it describes the approaches and the methods and techniques that should be employed. It also describes the specific tests, instruments, and diagnostic tools that should be employed and when they should be used. In this sense, this document is also a specific guide to the study.

These tasks are completed in:

Section B: contains the specific research objectives of the pilot study.

Section C: contains the basic definitions, schedules and study groups.

Section D: describes the techniques and instruments to use.

B. Research Objectives

The objectives are:

1. To measure and compare the performance and behavior of students enrolled in the pilot programs with students in control programs in terms of the differential impact these programs have on the students, teachers, parents, and community in such areas as:
    a. Increments in educational achievement as measured by standardized tests in the following areas: intelligence and general aptitude, mathematics and reading achievement.

    b. Improvements and/or changes in terms of standardized personality attitudes and tests.

    c. Changes in children's ability to establish and maintain effective relationships.

    d. Changes in self-image and social awareness.

    e. Changes in classroom climate and teacher attitudes.

    f. Changes in teachers' diagnostic ability.

    g. Changes in parent's attitude and their ability to deal with children.

    h. Changes in community attitude toward children with learning difficulties.

    i. The impact on pupils other than special needs children.

2. To measure, compare and evaluate behavioral changes that occur in the children in the pilot program compared to the children in the central program. These factors will be considered.
    a. School retention rates.

    b. Attendance.

    c. Reduction in social and personal disorganization; for example, truancy, delinquency, etc.

    d. Student use of supporting services.

    e. Reduction in teacher turnover.

    f. Return and retention of dropouts.

    g. Attitudes of parents, school personnel and community.

h. Home environment.

i. Teacher attitudes.

j. Effectiveness of paraprofessionals.

k. Effectiveness of special program media.

3. To evaluate the overall effectiveness of the pilot programs. Is the program as a whole, effective in terms of the objectives? What are the strongest and weakest components of the program? Specifically, this section of the project will be concerned with:

    a. Identifying effective components, shortcomings, strengths, and weaknesses of the program.

    b. Relating a specific portion of effective programs to objectives 1-a and 1-b above.

    c. Identifying and comparing the various effective program components with each other.

    d. Presenting the data so that the project can be replicated.

4. To state clearly and precisely, the manner in which the innovative features of the pilot program as a whole can be disseminated to other situations.

5. To collect comparative cost data from both the pilot schools and control schools and relate these costs to the benefits of the program.

C. Definitions and Approaches

1. Basic Ideas

a. Control schools will be selected by the Department of Education. Insofar as possible, control schools will be matched with the pilot schools in terms of size, age, enrollment patterns, and background of the children.

b. This project will utilize two basic methodological processes, quantitative-statistical and qualitative-case study methods.

c. The research techniques will range from standardized education tests to non-directive and informal interviews and observations. In actual practice, this project will utilize a variety of research methods in the same situations between these two extreme approaches.

d. The aim of the project will be not only to identify the effectiveness and effects of the pilot programs, but to compare these effects with the control schools a and to, insofar as possible, trace the cause and effect relationships.

e. The emphasis will be to provide data in such a form and in such a manner that will give strong indication and guidance as to what is transferable to other educational settings and situations.

f. The sampling scheme will be done in a statistically significant way.

g. This project spells out all the steps to follow, the techniques to be employed, the instruments to use, etc. However, it must be remembered that field experience will dictate changes.

h. In some cases, the research and evaluation, the gathering of data, etc., will be conducted and collected by staff members within the Department of Education and in other cases, by local school personnel.

2. Schedules and Responsibilities

The following table lists the research areas, methods, etc., to be employed. (The instruments are included in the Appendices). Here we indicate the areas, the time, and the frequency at which they will be used, as well as who will have the responsibility for collecting the data.

TABLE VI.
RESEARCH AND EVALUATION SCHEDULES

Areas	Purpose	When Used/ Collected	By Whom	Target Group	Frequency	Collection of Data	Responsibility for Summary and Analysis
1. Selecting children for sample programs	Selection	Beginning of Program	State1/ Schools2/	NA3/	1	State/ Schools	State/ Schools
2. Experimental and Control Groups	Research & Design	NA	State	NA	1	NA	State
3. Intelligence tests	Research	Fall/ Spring	Schools	E/C4/	4	Schools	State
4. Achievement tests	Research	Fall/ Spring	Schools	E/C	4	Schools	State
5. Attitude scales	Research	Fall/ Spring	Schools	E/C	4	Schools	State
6. Social awareness scales	Research	Fall/ Spring	Schools	E/C	4	Schools	State
7. Diagnosis and prescription	Selection	Beginning of Program	State Schools	NA	1	State/ Schools	State/ Schools
8. Parent interviews	Research	Fall/ Spring	Schools	E/C	4	Schools	Schools
9. Home visits	Research	Fall/ Spring	Schools	E 5/	4	Schools	Schools
0. Parent conferences and institutes	Research	Fall/ Spring	Schools	E	NA	Schools	Schools
1. Staff meetings	Information	NA	Schools	NA	NA	Schools	Schools
2. Cost data	Research	Throughout Programs	State	NA	NA	State	State
3. Children interviews	Research	Throughout Programs	Schools	E/C	NA	Schools	State
4. Classroom observations	Research	Throughout Programs	Schools	E/C	NA	Schools	State
15. Staff interviews	Research	Throughout Programs	Schools	NA	NA	Schools	State
6. Program reviews	Research	Fall/ Spring	State	NA	4	NA	State
7. Public interpretation programs	Information	Fall	Schools	NA	2	NA	Schools
3. Impact on schools	Research	Fall/ Spring	State	NA	2	State	State
. Comparative analysis	Research	Fall/ Spring	State	NA	2	State	State

1/ State refers to State Department of Education
2/ Schools refers to the participating school system
3/ NA means "Not Applicable".
4/ E/C means Experimental and Control Groups
5/ E means Experimental Groups

3. The Study Groups

Table VII, presents the basic study plan. Four experimental and four control schools will be included in the study. In each group, two schools will have a population of about 600 each and two of 900 each. All will be elementary schools.

It is estimated that about 20% of any school's population will be eligible for services. Thus, each school will provide 120 to 180 children. It is further estimated that they will be distributed among the various programs as follows:

Program I -- 40 to 60 children

Program II -- 40 to 60 children

Program III -- 20 to 30 children

Program IV -- 20 to 30 children

Program V -- 5 to 10 children

These distributions, of course, are somewhat artificial because children may move from program to program.

The control schools will be selected on the basis of the following criteria:

1. Enrollment
2. Similarity to children in experimental group in terms of race and sex.
3. Socio-economic characteristics of the community in which the school is located.
4. Years of service of teachers.
5. Number of teachers with advanced degrees.
6. Classroom size (when possible).
7. Teacher turnover.

TABLE VII.

SAMPLE PROGRAMS

	Experimental Schools				Control Schools			
	School A	School B	School C	School D	School W	School X	School Y	School Z
Total Population	900	900	600	600	900	900	600	600
Estimated No. of children eligible for services	180	180	120	120	--	--	--	--

The focus of the study will be the impact of the schools on the children. In terms of the experimental school children, the major questions become: who are the children and what happens to them and what is the impact of the experimental program on the children in the Continuum as well as regular school children. In terms of the control schools, how do the overall schools (behavior, educational increment of children, administrative structure, cost, etc.) compare with the experimental schools.

D. Evaluation Tools and Techniques

1. Techniques

The basic focus of this evaluation is the growth and development of children with learning difficulties as they participate in this new program. The diagnostic tools to be used as a pre-test and post-test to evaluate the changes are as follows:

a. Intelligence tests.

b. Achievement tests.

c. Social Competency Scale

d. Perceptual motor dysfunction scales.

e. Self-image or social awareness scales.

f. Home environment ratings.

g. Parental attitude scales.

h. Teacher attitude scales.

i. Peer attitude scales.

j. Overall classroom environment.

k. Administrative relations.

l. Cost.

Informal methods of evaluation to be conducted both in the initial stage as well as during the program and at its conclusion include the following:

a. Interviews with parents.

b. Interviews with regular teachers (on an individual and group basis).

c. Interviews with ancillary personnel and special education personnel.

d. Interviews with administrative personnel.

e. Observation of programs (both in demonstration and control schools) and program review.

f. Informal listening-in on conversations and participation in a variety of meetings to informally obtain neighborhood reactions.

g. Case studies.

h. Studies of materials and media.

i. Interviews with administration and teachers in control schools.

2. Study Instruments[23]

Instruments and tests to be used are in the following areas:

a. School Children

   (1) Scholastic achievement.

   (2) Report card data--grades, citizenship, and attendance.

   (3) Verbal skills.

   (4) Teacher rating scales.

   (5) Social awareness scales.

   (6) Attitude Scales--toward school, family, peers, and self.

   (7) Projective personality tests.

   (8) Parent attitude scales.

   (9) Home environment scales.

b. Parent Interviews: Questionnaires designed for parents deal with the following:

   (1) Parental conceptions of the functions of the school.

   (2) Attitude toward the programs.

   (3) Attitude toward the children.

   (4) Parental attitude toward teachers.

   (5) Parental attitude toward the administration.

   (6) Aspirations for children.

   (7) Parental involvement in the school and the community.

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[23] Specific instruments are in the appendices.

(8) Parental experience with special needs children and programs.

c. Teacher and Staff Interviews: Instruments designed for the teachers and staff members focus on these areas.

(1) Overall attitude toward special needs children.

(2) Overall conception of the function and purposes of the particular program in which the staff member is involved.

(3) Professional relationships among the staff.

(4) Teacher's conception of his role in the program related to program planning, scheduling, and use of other staff.

d. Informal Interview Guides: These guides are prepared for use with a variety of audiences, not necessarily included in the sample. These audiences include informal opinion leaders, religious leaders, government officials, and others who might be interviewed and/or observed and/or "overheard." These informal guides are to assist field staff in inquiring on an informal basis.

e. Checklists: A variety of checklists are provided to assist the field staff in gathering information on the development of the program and how school personnel, community leaders, and members of the community perceive the significance of the program approach.

IV. OTHER INFORMATION

A. Uses to be Made of This Study

The statistical data in this study should be presented in terms of pre and post-test means, mean differences between experimental and control groups, standard "t" tests, levels of significance, and other statistical manipulations that are appropriate. The non-quantitative data will be used to evaluate and probe levels the statistical data is unable to reach and will be in the form of content analysis, non-directive interviews, records of meetings, etc.

The specific uses of this research report are in the following areas:

1. An evaluation of the pilot programs in terms of:
   - a. Overall accomplishment.
   - b. Effects in specific areas.
   - c. Areas that need strengthening.
   - d. Comparison with control schools.
   - e. Cost of the program.
2. An aid in implementing programs:
   - a. The portions of the pilot programs that will be effective in other settings.
   - b. The portions of the pilot programs that might be effective in other poverty settings.
   - c. The portions of the pilot programs that should have high priority for transferability.
3. In essence, the report of this study will provide a manual for the total evaluation of the pilot project. It can serve as a tool for ongoing evaluation and future planning.
4. The report will include methods of systematically maintaining a record of the pilot program in terms of:
   - a. History.
   - b. Areas of effectiveness.
   - c. Causes of effectiveness.
   - d. Accomplishment.
   - e. Areas where strength should be encouraged.

5. The cost of pilot program in terms of effectiveness involves an analysis of the cost of special education staff utilized in the pilot program compared with the cost of such staff in the control schools. This analysis should be interpreted in terms of the findings related to program effectiveness and program objectives. The following functions should be considered in the analysis:

   a. The impact upon the regular teacher.

   b. The integration of special needs children in the regular class.

   c. The use of special education staff.

B. Phasing-in the Pilot Study

This project is scheduled to start in September 1970. At this writing, this starting date is more than a year away; therefore, there is ample time to plan these activities:

1. Selection of the Project Director.

2. Selection of the study schools.

3. Teacher training.

4. Starting the diagnostic program.

To provide comparable data, it is important that this research study start at the same time in all schools. This should be the only problem in the phasing-in stage and will require a heavy utilization of consultant services in the spring of 1970 for diagnosis and selection.

The entire process is described in chart form in Appendix VII.

C. Staffing Requirements

This project will be the responsibility of a full-time staff person in the Division of Instruction. In addition to the Project Director and supporting clerical staff, the following technical assistance will be required:

1. Questionnaire construction, validation, pre-testing and psychological tests--two to three man-months.

2. Economist for cost effectiveness analysis--three man-months per year.

3. Research Associate--36 man-months per year.

4. Research Assistant--three man-months per year.

5. Parent Education Consultants--three man-months per year.

In addition, these kinds of services will be required, though at the present time, it is impossible to estimate the actual needs.

1. Key punching services.

2. Computer programming.

3. Diagnosis and testing services.

The assumption in this section is that the collection of data will be done by the participating schools while the processing will occur within the Division of Instruction.

D. Other Needs

This proposal does not estimate these needs:

1. Travel.

2. Consumable supplies.

3. Educational equipment and supplies.

4. Equipment rental.

5. Telephone and telegraph.

6. The cost of reports and publications to be produced by the project.

7. Administrative expenses.

E. The Major Perspective of this Study

The pilot project will gather a considerable amount of data that will aim at providing policy guidance in two significant and major areas:

1. This study will indicate the extent to which the continuum provides a more effective delivery system in special education than approaches now in existence. In this context, the study will report on the effectiveness of diagnosis and selection, the quality of education, the effect of mixed classes, and a variety of other pedagogic questions that go to the heart of such a basic problems as educational organization, delivery, and staff relationships.

2. The study will not only provide evidence on the effectiveness and value of the continuum, but guidance on how to implement the continuum in other schools. In this respect, the study should provide information on administrative changes that will be necessary, architectural and building changes that might be required, staff training needs, attitudes of parents, attitudes of children, and a variety of other questions that will

provide strategic information to assist the State Department of Education in implementing the significant portions of the continuum.

In addition to these two major contributions the pilot study will make to the specific needs of the Maryland State Department of Education, the study will also provide basic education and guidance for special education throughout the United States. As is noted in several places throughout this report, there is considerable dissatisfaction with the orientation of special education in the United States. This study should provide guidelines for educational innovation and provide much useful information for special education units in other states and the Federal government.

APPENDIX I

DEFINITION OF TERMS

Definition of Terms

The following terms appear frequently in this proposal:

Diagnostic teacher: one to whom children are referred from the regular classroom because of their academic and/or concomitant behavioral problems. It is his duty to examine the learning environment in which children function and the learning processes by which children perform academically. Beginning with careful observation and specific diagnosis of basic behavioral functions he determines the specific behavioral strengths and weaknesses, area and type of remediation, or curricula component that is applicable. The diagnostic statement is prognostically important to the teachers involved because it states the prescription in educational language.

Prescriptive teacher: one who uses the diagnostic construct as individually prepared by the diagnostic teacher in a regular classroom setting, a resource room, or on an itinerant teaching basis. He institutes specific behavioral applications for children with moderate to severe perceptual and cognitive deficits. He may use standard curricula, remedial and clinical teaching procedures, adapted and adopted for an individual learning process (style) in those cases where learning has not occurred, but where a behavioral deficit has not been diagnosed. Hence, a prescriptive discrimination is executed between children who need further academic stimulation (remediation) and those who need behavioral modification (perceptual and cognitive deficits). The plan of action developed by the prescriptive teacher is one that constitutes a classroom management plan supported by a multi-disciplinary team (not an interdisciplinary base, a fine but pertinent distinction) based on either a regular class curriculum or a special education one.

Both of these persons (they may be one and the same) are specifically trained special educators who bridge the gap between special classes, resource rooms, and the regular surroundings for children who need remedial and other special assistance.

Itinerant Teacher: an organizational plan whereby pupils spend a majority of their school day in regular classrooms, but receive special instruction individually or in small groups from itinerant teachers who travel among two or more schools devoting more than half their time to direct instruction of pupils.

Population Definition

Pupils with:

1. Behavioral Disabilities which may or may not have been the result of neurologic damage or defect. This may be manifested in (a) learning disability most attributable to intellectual limitation; (b) poor behavioral organization; (c) inappropriate and erratic behavior under ordinary circumstances or circumstances of mild provocation manifested in disinhibition, detractibility, and hyperactivity; (d) disorganized thinking reflected in perceptual disorder and faulty conceptual formation.

2. Communicative Disabilities are exhibited in: (a) an inability to deal with symbols of communication, i.e., language, reading and writing as reflected in poor integration of sensory functions into experiential patterns of symbolization; (b) developmental failures or organic deficits which prevent proper acquisition and utilization of effective speech patterns.

3. Mental limitations are those precisely seen as: (a) a general sub-normal intellectual functioning; (b) a greatly reduced rate of mental growth resulting in difficulty in learning the formal material of the regular curriculum including academic subjects.

4. Physical disabilities are those where there is (a) a presence of physical impairments which may not be accompanied by neurologic damage; (b) educational retardation based upon the lack of normal experiences, absences from school and the necessity of functioning at a reduced rate.

Other definitions include:

1. Special Class: This is a specially staffed and equipped room in which pupils receive three-fourths or more of their formal instruction. These classes are housed in regular and special schools.

2. Cooperative Special/Regular Resource Room: A specially staffed and equipped room in which pupils are enrolled or registered with the special teacher, but receive less than three-fourths of their formal instruction here. The remainder is spent in regular classrooms.

APPENDIX II

THE PARENT AND COMMUNITY EDUCATION PROGRAMS

The Parent and Community Education Programs

The education of parents who have children with learning difficulties should be an essential element of the "Continuum of Program Design." Some parents tend to overprotect these children, thus hindering their development and limiting their ability to reach their full potential both in terms of educational achievement and in terms of functioning independently. Other parents tend to neglect such children and regard them with disdain, comparing them unfavorably with other siblings.

The attitudes of their brothers and sisters as well as peers in the community often tend to promote their retardation and rob them of initiative and stimulation for self-development.

It is, therefore, essential that the school program be re-enforced in the home. The parents should be helped (a) to develop a positive understanding attitude toward children with learning difficulties, particularly those that are handicapped; (b) to create a positive atmosphere in the home which will support the school's efforts; and (c) to effect the attitude of the other children and to bring into the home appropriate materials for the child's stimulation.

Concerned parents need guidance and assistance in coping with their children who have difficulties. Parents who tend to neglect their children need to be helped to understand the reason for the neglect and to provide the special care needed to assist the child in his developmental stage.

In general, our society has little patience for those who are different. There is, therefore, a need to affect a general community attitude which will bring about a moresympathetic understanding of these children's problems which will encourage the integration of those children into the life of the community.

The following activities are suggested to provide support to the parents and family members and to build bridges between the schools, the home, and the community.

1. Plan and conduct a general meeting of the PTA or parents of the school to interpret the overall goals of the "Continuum of Program Design".

2. Conduct meetings with parents in small groups organized on the basis of particular problems. The purpose of these meetings is to interpret the specific program design and to present suggestions for creating a positive home environment.

3. Conduct conferences with parents of children with learning difficulties on an individual and group basis to share with them the diagnosis and to interpret the prescription design.

4. Conduct meetings where parents can meet the special education staff. This may include some demonstration by special education staff of the materials and methods utilized in the program.

5. Conduct an intensive institute for parents on activities to be introduced in the home to support the school's program. They should

be related to specific needs of the children and their problems; such as motor skills, retardation, handicapped, hearing difficulties, visual difficulties, etc.

6. Occasional visits to the home to observe home environment and conduct total family education discussion. This might include conferences with siblings as indicated.

7. Arrange local T.V., radio, and press interviews to interpret the "Continuum of Program Design."

8. Help the public library to arrange a special exhibit in programs for children with learning difficulties and stimulate the library to include appropriate materials in their collection.

9. Arrange for presentations of the program to civic and church groups in the area.

The conduct of these programs requires adequate planning and the assignment of staff for their implementation.

In summarizing the basic elements of this Continuum of Program Design, one needs to stress the following:

1. Adequate diagnosis for children with learning difficulties.

2. Flexibility so that children may be moved from program to program as needed.

3. A specific prescription for each individual child related to his particular needs.

4. Provisions for multidisciplinary staff operating as a team. This would include the school health services, psychologists, speech and hearing therapists, teachers for the visually impaired, language specialists, general counselors, vocational and rehabilitation counselors, and teacher aides.

5. Emphasis on continuing support for the regular classroom teacher through counseling, provision of special materials, and training in the use of these materials.

6. Education of parents to deal with their children who have learning difficulties and provide for mutual support between the school and the home.

7. Education of the community toward a better understanding of children with learning difficulties and handicaps.

APPENDIX III

DATA COLLECTION PROCEDURES AND FORMS FOR CHILDREN

The following instruments are the basic forms for children in the Experimental and Control groups. Instruments 1 & 2 are for all children; instruments 3, 4, & 5 are for experimental groups only.

Instrument 1

Data on Children From School Records

Name of school ______________________ Program Number ________

Name of child ______________________

Address ______________________

Questionnaire completed by ____________________ Date ____________

FOR EACH CHILD:

1. Age of child _____

2. Grade in school _____

3. Is child in proper grade for his age?

   1 Yes
   2 No

4. Are his grades:

   1 Above average
   2 Average
   3 Below average

5. Is his attendance:

   1 Poor
   2 Intermittent
   3 Regular

6. If attendance is poor, is it due to:

   1 Physical problem
   2 Negative attitude toward school
   3 Parental interference
   4 Other

7. If attendance is poor (check as many as apply):

   1 Has parent(s)been contacted
   2 Has truant officer been active in case
   3 Has school social worker been active in case

8. Is behavior of child in classroom:

   1 Poor
   2 Average
   3 Very good

9. Has child been given an intelligence test?

   1 Yes
   Score _______
   Date: Month _________ Year ________
   2 No

10. Describe tests used on child

    1 ________________________
    2 ________________________
    3 ________________________
    4 ________________________
    5 ________________________
    6 ________________________

11. How many schools has child attended previously?

    0 None
    1 One
    2 Two
    3 Three
    4 Four or more

12. Has teacher, teacher-nurse, or other school authority recommended child: (check as many as are appropriate)

1 Be tested by specialists
2 Be referred to Juvenile authorities
3 Be referred for medical care
4 Be sent to special school
5 Be excused from attending school
Comments: ______________________________

____

13. Does school have a lunch program for this grade?

1 Free lunch program
2 Lunchroom--meals served
3 Lunchroom--no meals served
4 None of the above

14. Is supervised after school hour program provided for children of this age?

1 Yes
2 No

15. Report Card Data

Subject	First Year			Second Year			Difference First - Second
	First Period	Second Period	Difference	First Period	Second Period	Difference	

NOTE: These data should be reduced to quantitative terms for comparative purposes.

16. Does the child have siblings in this school?

1 Yes, list ______________________________
2 No

17. If yes to 16, are any in experimental programs ?

1 Yes, describe______________________________

____
2 No

18. Father's occupation:

____

Instrument 2

Month ______ Year ______

TEACHER RATING FORM

Pupil Name ________________________________ Teacher ________________________

Please place next to each item the letter(s) of the category chosen (see categories below). It is not necessary to spend a great deal of time in assessing the pupil. Please answer all items, even if you are uncertain or have little information. If you cannot answer an item, please write in "Don't Know."

Please place the appropriate letter(s) next to each item:

VF - Very Frequently
F - Frequently
S - Sometimes
I - Infrequently
VI - Very Infrequently

____Shows initiative
____Blames others for trouble
____Resistant to teacher
____Alert and interested in school work
____Attempts to manipulate adults
____Appears depressed
____Learning retained well
____Absences or truancies
____Withdrawn and uncommunicative
____Completes assignments
____Influences others toward troublemaking
____Inappropriate personal attitude
____Seeks constant reassurance
____Motivated toward academic performance
____Impulsive
____Lying or cheating
____Positive concern for own education
____Requires continuous supervision
____Aggressive toward peers
____Disobedient
____Steals
____Friendly, and well-received by other pupils
____Easily led into trouble
____Resentful of criticism or discipline
____Hesitant to cry, or gives up easily
____Uninterested in subject matter
____Disrupts classroom procedures
____Swears or uses obscene words
____Appears generally happy
____Poor personal hygiene
____Possessive of teacher
____Teases or provokes students
____Isolated, few or no friends
____Shows positive leadership

INSTRUMENT 3

INFORMATION ON INDIVIDUAL STUDENTS SPECIAL SERVICES

SCHOOL____________________ Teacher____________________

NAME	DATE SER-VICE BEGAN	DATE SERVICE TERMIN-ATED	NO. OF MEETINGS ATTENDED	PROP. OF TOTAL MEETINGS ATTENDED 1/	NO. OF IND. CONTACTS WITH WKR. 2/	NO. OF SCHOOL ABSENCES	
						EXCUSED	UNEXCUSED

1/ THE PROPORTION OF MEETINGS ATTENDED SHOULD BE BASED ON THE TOTAL NUMBER OF MEETINGS HELD DURING THE TIME SERVICE WAS EXTENDED TO children.

2/ INCLUDE with children outside group meetings, home visits where client is seen, etc.

INSTRUMENT 4

REFERRAL FORM FOR GROUP TREATMENT

NAME	FREQUENT DISRUPTION OF CLASSROOM; IMPEDES CLASSROOM PROCESS AND LEARNING OF TOTAL GROUP; REQUIRES SPECIAL TEACHER ATTENTION	FREQUENT MISUSE OF SCHOOL PROPERTY	FREQUENT TROUBLED RELATIONS WITH OTHERS ON SCHOOL GROUNDS PUPILS ADULTS	PERSISTENT VIOLATIONS OF SCHOOL RULES, SUCH AS SMOKING, LACK OF MATERIALS, TRUANCY, TARDINESS, INAPPROPRIATE DRESS	VERY WITHDRAWN, ISOLATED, INHIBITED, DOES NOT RESPOND OR PARTICIPATE	SOMEWHAT WITHDRAWN, MAY BE ISOLATED OR INHIBITED, HESITANT IN RESPONDING AND PARTICIPATING (PROBLEMATIC BUT LESS SEVERE THAN category TO THE LEFT)	UNDERACHIEVE RELATIVE TO ABILITY	Program Number

REFERRED BY ____________________

INSTRUMENT 5

Information on Individual Children 1/

School____________________________ Teacher____________________________

				I. Q. 2/			Grade 3/	Grade 4/		
Name	Age	Sex	Race	Group Test Score	Ind. Test Score	School Grade	A	B	Father's or Breadwinner's Occupation	Presenting Problem 5/

1/ If information is not from school records, indicate source--should be obtained from school records wherever possible

2/ Record both I.Q. scores if available and date.

3/ Grade average at beginning of service.

4/ Grade average at termination of service.

5/ Record referring statement of problem(s).

APPENDIX IV

TEACHER INTERVIEWS AND SURVEY

This instrument is designed for teachers in mixed classes. With some modification, it can be administered through the mail or by an interviewer. Also, with some minor modifications, it can be used with teachers in the control groups.

TEACHER INTERVIEW GUIDE

CITY ______________________________

School: __________________________________

Instructions

1. Answer every question.
2. Answer the questions only this way: CIRCLE THE NUMBERS THAT BEST REPRESENT your position.
3. Some questions ask you to write a phrase or two. Please be as thorough as possible.

I. PERSONAL BACKGROUND

A. Your age: __________

B. Sex:
1 Male
2 Female

C. Where you were born

1 United States
2 Foreign born

D. Where was your father born?

1 United States
2 Foreign born

E. Major occupation of father or guardian

1 Professional, not school teacher
2 Professional, school teacher
3 Manager
4 Clerical or sales
5 Service worker
6 Skilled
7 Semi-skilled
8 Unskilled
9 Farm operator
0 Farm labor
x Other, describe ________________

II. PROFESSIONAL BACKGROUND AND PREPARATION

NOTE:
Why did you become a teacher? What kind of preparation have you had? What job satisfaction do you get from teaching?

A. The first year you started teaching: ____________

B. Why are you teaching? Circle one only:

1 Drifted into it
2 Good secure job
3 Better than most white collar jobs
4 Teaching gives a sense of satisfaction
5 Inspired by a parent, friend or relative
6 Inspired by former teacher
7 Good salary
8 Don't really know
9 Other reasons: ________________________________

C. What is your highest level of formal education:

1 B.A. degree
2 Graduate work, but less than M.A.
3 M.A. degree
4 More than M.A., but less than doctoral
5 Doctoral degree

D. In your regular assignment do you?

1 Have tenure, regularly assigned
2 Full-time substitute
3 Regularly assigned, but do not have tenure
4 Other, ________________________________

E. Level of regular teaching assignment

1 Elementary school: K-2
2 Elementary school: 3-5
3 Elementary school: 6-8
4 Upper grades
5 Commercial or Vocational high school
6 General high school
7 Other, ________________________________

III. TEACHING SPECIAL EDUCATION

> NOTE:
> We are interested in the overall process of teaching special education children. How and why did you get involved? Do you particularly enjoy teaching these kinds of children? What problems and difficulties do teachers face in these programs?

A. Are you a member of a professional association?

1 Yes, name ______________________________
2 No

B. How did you become a teacher in this program?
Describe the process: ______________________________

____

C. Why are you teaching this program?

1 To supplement income
2 The only teaching situation available
3 I enjoy it--sought it out
4 I have always taught this subject
5 Other, ______________________________

D. Total months you have taught special education children:

1 Less than one month
2 More than one; less than three
3 More than three; less than six
4 More than six; less than one year
5 More than one year; less than 2 years
6 More than three years

E. What satisfactions do you get from teaching this program?

1 I enjoy it very much--best teaching assignment one could get
2 I enjoy it a little--somewhat better than regular program
3 I have no strong feelings one way or the other--all assignments about the same
4 I dislike it a little--it's a "poor" assignment
5 I dislike it a lot--it's as "poor" a teaching assignment as you can get

Briefly explain: ______________________________

____

F. Is this your first experience in special education?

1 Yes
2 No

G. If offered a full-time assignment in this area would you accept?

1 Yes, I would definitely accept
2 Yes, I would probably accept
3 I don't really know
4 I'm not sure, would probably not accept
5 No, I would not accept

H. What kind of preparation have you had for teaching these programs?

1 One or more graduate courses in special education
2 Minor in special education
3 In-service training
4 Post-graduate courses
5 Institute or conferences
6 None, just started teaching
7 Other, specify ____________________________

I. Before teaching programs of this kind, teachers often have definite feelings of what to expect. After teaching they may change these attitudes, find them confirmed or develop new ones. Please read this list and check in Column 1 only those statements expressing feelings you had before the program. Then read the list again and check those statements in Column 2 expressing feelings you had after the program started.

	Column 1	Column 2
	Expected before program started	Experienced after program started
Some students would have disagreeable personal and social habits	1	1
Some students would be unduly aggressive	2	2
Some would be "unteachable"	3	3
The teaching role would be mostly custodial	4	4
Bizarre things would occur	5	5
It would be a joy to teach these children	6	6
Most would want to learn too	7	7
Many would have serious problems	8	8
The major problem would be to motivate children who didn't care	9	9
Some would bring pressing personal problems to the school situation	0	0
It wouldn't work to mix with regular programs	x	x
Other, specify	y	y

J. What are the major factors that you think make for success in teaching these programs in special education?

1 Patience and tolerance for the students
2 Being able to motivate the students
3 Understanding the students
4 Keeping the entire class involved
5 Maintaining discipline
6 Special training
7 Other, specify ________________________

K. What do you think new teachers need for teaching these programs?

1 Cadet-type experience
2 In-service training
3 College and university level courses in adult education
4 A "how-to-teach" (methods) program
5 Lectures, discussions, etc., on the social and psychological background of welfare recipients
6 The only real preparation is to "just get in and do it"
7 Other, specify ________________________

L. Do those teaching this program have regular meetings?

1 Yes, what _______% attend
2 No

M. Are these meetings useful and helpful?

1 Yes, very much
2 Yes, somewhat
3 No, not very
4 No help at all
5 D.K.

N. If attendance is a problem, what do you think should be done about it?

____

____

O. Are you satisfied with the consultation services available to you?

1 Very satisfied
2 Fairly satisfied
3 Not very satisfied
4 Not satisfied at all
5 I don't receive any
6 I don't know

P. Which kind of consultant has been most helpful to you? Place a "1" beside the most helpful, a "2" beside the next helpful, etc.

___Psychiatrist
___Psychologist
___Pupil Personnel Worker
___Counselor
___Instructional Supervisor (Special)
___Instructional Supervisor (Regular)
___Public Health Nurse
___Itinerant Teacher
___Speech and Hearing Therapist
___Diagnostic and Prescriptive Teacher
___Resource Room Teacher
___Vocational Rehabilitation Personnel

Q. Are the consultants accessible? Are they there when you need them?

Yes____ No____ Need more time with them____ Time is adequate____

IV. THE CLASSROOM SITUATION

NOTE:
We are interested in the overall learning situation; what is strong and what is weak? What do you think is needed to strengthen the program? What is your estimate of the capacity and the potential of the students?

A. Overall, to what extent do materials help achieve these general objectives?

	Very Much	Some-what	Not very much	Not at all	D.K.	Explanation
They result in a significant change in reading ability	1	2	3	4	5	
Students can do work they could not do before schooling	1	2	3	4	5	
Students can lead more satisfactory and useful lives such as reading newspapers, buying groceries, etc.	1	2	3	4	5	
The materials make it possible to learn with poor teaching	1	2	3	4	5	
The materials are adaptable to changing student interests and needs	1	2	3	4	5	
The materials are interesting to the students	1	2	3	4	5	
For the students the materials are both difficult and enjoyable at the same time	1	2	3	4	5	

B. In addition to the general education, should these people be taught anything else?

1 Yes, Specify ______________________
2 No

C. Do you assign home work to all children?

1 Yes, what % of the students complete it? ________%
2 No

D. Are the students permitted or encouraged to take text books and other materials home?

1 Yes
2 No, why?____

E. In your opinion, what would be the best kind of school facilities for special education children?

1 Just as they are now
2 Special facilities
3 Any adequate facility, but not a formal school building
4 Other, specify ____________________________________

F. Are you satisfied with the assistance you get in curriculum development?

1 Very satisfied
2 Fairly satisfied
3 Not very satisfied
4 Not satisfied at all
5 I don't receive any
6 I don't know

V. INTERPERSONAL RELATIONS IN THE CLASSROOM

NOTE:
What kind of classroom situation do you think most useful? Do you have difficulties as a result of mixing? Do the students bring personal problems to school? Do you have informal relations with the students outside the classroom?

A. Do students bring personal problems to the classroom?

1 No
2 Yes, briefly describe the three most vivid examples:

First example: ______________________________

____

Second example: ______________________________

____

Third example: ______________________________

____

B. Do you prefer a "formal" or "informal" atmosphere in the classroom?

1 Formal
2 Somewhat in between
3 Informal

C. Organization in the classroom

	Yes	No	Why
Have group sit in circle			
Encourage use of first names			
Try to have informal chats with each student			
Gave students confidential evaluations			
Occasionally celebrate events like birthdays or anniversaries			
Have progress reviews and evaluations			
Other, specify ______________			

D. Do students present difficult personal or social habits?

1 Personal hygiene, __________%
2 Disorderly behavior, __________%
3 Lack of motivation, __________%
4 Maintaining attention, __________%
5 They can't be understood, __________%
6 Frequent tardiness, __________%

E. Present average class size (of those in attendance) and what would be desirable?

Average size	Now	Desirable
ten or less	1	1
11 - 15	2	2
16 - 20	3	3
21 - 25	4	4
more than 25	5	5

VI. ADMINISTRATIVE POLICIES AND PROCEDURES

NOTE:
We are interested here in how teachers view the administration of the program and how they think the administrators see the program.

A. Materials usually used are:

	Yes	No	Partially	OK
In sufficient quantity				
Of high quality				
Appropriate				
In good condition				
Interesting to the students				
Most suitable available				

B. What priority is given the program:

	By the Central office	By the Local school
Very high		
Fairly high		
Fairly low		
Very low		
DK		

C. Is excessive record keeping required of teachers?

1 No
2 Yes

VII. IMAGES AND ATTITUDES

A. Please react to the following statements. Tell whether you agree with the statement, disagree, or have no opinion.

	Agree	Disagree	No Opinion
When special education children do not learn it is usually the teachers fault	___	___	___
I feel uncomfortable around special education children	___	___	___
Public aid recipients are victims of circumstances	___	___	___
Public aid recipients could get jobs if they wanted to	___	___	___
The public aid grants are more than enough for bare subsistence	___	___	___
Taxpayers shouldn't provide any more than usual support for special education children	___	___	___
Most public aid recipients came to Maryland to get relief	___	___	___
Other children feel uncomfortable around special education children	___	___	___
ADC mothers generally neglect their children	___	___	___
Special education children generally do not get adequate medical care	___	___	___
Public aid families have more children in order to get larger grants	___	___	___

VIII. PROGRAM IMPACT

NOTE:
Discuss problems of dropouts and early terminations from program: Why do some students drop out? Has a pattern emerged--that is, in terms of age, sex, ethnic group, personality characteristics, special problems, etc.? Do dropouts tend to cluster at the beginning, end or middle of the program? To what extent can dropouts be attributed to family and personal problems (cite examples)? Do teachers have any role in dropout problems? How do teachers feel about this problem? Are they concerned? Are they happy to see some go? Do they try and anticipate dropouts and insofar as is possible correct problems in advance?

Examples and illustrations: ______________________________

____

____

____

____

____

B. Impact of the program:

1. Do many students want to continue their education: ______________

____

2. Estimate proportion of students who read and write at home: ________

____

3. Effect of program on relations with children: ______________

____

4. Effect of program on students' personal live: ______________

____

5. Effect of program on students' personal feelings about themselves: _____

____

IX. PROGRAM EVALUATION

A. If you were placed in charge and given an unlimited budget to maximize the effectiveness of the program what specific changes would you make in these areas?

1. Teachers ______________________________
2. Equipment ______________________________
3. Space, facilities ______________________________
4. Counseling and guidance ______________________________
5. In-service training ______________________________
6. Curriculum guidance ______________________________
7. Improved materials ______________________________
8. Innovations and experimentations in materials, team teaching, teaching aids, etc. ______________________________

   ____

9. Others ______________________________

   ____

B. What do the students need when they complete the programs:

1 More of same--they haven't learned much
2 Reading materials and other inducements to continue learning
3 Vocational education
4 A job where they can use what learned
5 Family and personal guidance and counseling
6 Job guidance and counseling
7 Other, specify ______________________________

C. Additional comments and suggestions ______________________________

____

____

APPENDIX V

PARENT AND HOME SURVEY

This appendix contains the basic instruments for the home survey. The instrument is written for administration by a school social worker or experienced interviewer and will have to be modified if trained interviewers are not used.

This basic instrument should be administered to each family in the program at the beginning of enrollment. The education portions should be administered again at the end of the first and second year.

HOME ENVIRONMENT STUDY

1. Do parents talk with children about school work? Yes____ No ____

   How often? ____________________

2. Do parents feel child has special learning problems? Yes____ No____

   What kind?____

   How do they feel about the problems?______________________________

3. Have parents been to school to see teacher? Yes____ No____

   How often?____

   Have they gone of their own initiative or at request of the school?

   ____

4. Do children help each other? Yes____ No____

5. What are the children's attitudes toward each other?__________________

   ____

   Do they quarrel a great deal? Yes____ No____ Is there any scapegoating? Yes____ No____ Is there sibling rivalry? Yes____ No____.

6. Do parents know where child is at all times after school hours?

   Yes____ No____

7. Do children have friends? Many____ Few____ None____

   How do they spend their time together?____________________________

8. Approximately what portion of the child's time is spent on TV, movies, special events, activities in settlement houses or recreation centers?

   __________What kinds of recreation programs are available that the children enjoy?____

   ____

9. Are there such things as picnics, outings, going to the circus, etc.?

   Yes____ No____ Explain:____

   ____

Study number ______

HOME INTERVIEW GUIDE

Head of Household Name ______________________________
(last) (first)

Address ______________________________
(house number & street) (apt.#)

Name of Person Interviewed ______________________________

Relationship to head of Household

1 Head of household
2 Spouse
3 Child over 18
4 Relative
5 Other, specify ______

Name of Interviewer ______________________________

Day of Interview __________ Date __________ AM____ PM____ Eve______

Time of Interview: Start ________ Finish ________

Length of Interview

1 Less than 30 minutes
2 Thirty minutes, but less than 1 hour
3 One hour, but less than 1 1/2 hours
4 One and a half hours to 2 hours
5 Over 2 hours

I. HOUSEHOLD COMPOSITION

A. Write in the number of persons in this household ________

B. Household composition--circle appropriate description of household

1 Single individual
2 Couple
3 Couple & adult
4 Couple & children
5 Couple & adult & children
6 2 or more adults
7 Adult with children
8 Adult with children & other adults
9 Two or more family units
0 Other, specify ______________

C. Enter number of people in household in each age group

Age	Male	Female
0 - 5	____	____
6 - 11	____	____
12 - 14	____	____
15 - 17	____	____
18 - 24	____	____
25 - 44	____	____
45 - 60	____	____
Over 60	____	____

CODES FOR HOUSEHOLD COMPOSITION GRID

(1) Name -- record last name first

(2) Relationship to Head of Household (explain if necessary)

1 Head of Household
2 Spouse
3 Daughter
4 Son
5 Grandson
6 Granddaughter
7 Mother-in-law
8 Father-in-law
9 Other relatives, specify
0 Roomer
x Other, specify
y NA

(3) Sex-Race

1 Male Negro
2 Female Negro
3 Male White
4 Female White
5 Male other
6 Female other

(4) Age

Enter actual age (estimate if necessary)
If NA, use XX

(5) Birthplace

Write in name of state or country.

(6) Grade of School

Write in number of highest grade completed, e.g., if high school, write in 12; 2 years of college, write in 14; use XX for NA

(7) Marital Status

1 Married - legal
2 Living together as married, common law
3 Single -- never married, children
4 Divorced
5 Widowed
6 Separated
7 Deserted
8 Not Determined
9 Other, specify

(8) Principle Activity (what individual does most of the time)

1 Employed, full time
2 Employed, part time
3 In school
4 Pre-school
5 Unemployed
6 Homemaker
7 Retired
8 Other, specify

(9) Comment

Use to explain or specify any material that needs explanation

D. HOUSEHOLD COMPOSITION AND OTHER DATA

(USE CODES FROM OPPOSITE PAGE)

(1) Name (last) (first)	(2) Relation-ship	(3) Sex-Race	(4) Age	(5) Birthplace	(6) Grade of School	(7) Marital Status	(8) Principal Activity	(9) Comment
1. (head)								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								

II. HOUSING

A. What type of building is this?

1 Single family dwelling only
2 Two family dwelling only
3 Multiple family dwelling only
4 Mixed commercial and residential

B. How many rooms does the household occupy; how many are for sleeping? (exclude hallways, bath, foyer and shared kitchens)

Total Number of Rooms ________

Number of Rooms for Sleeping ________

C. Is the residence owned or rented, furnished or unfurnished?

1 Owns home (SKIP TO H)
2 Rents home/furnished
3 Rents home/unfurnished
4 Rents apartment/furnished
5 Rents apartment/unfurnished

D, E, F, AND G, FOR RENTERS ONLY

D. How much rent is being paid per month? (If NA, write in XXX; if no rent 000)
$____________

E. How much do utilities cost per month? $____________

F. Does amount of rent present a financial problem to the household?

1 Yes
2 No
3 Sometimes
4 N.A.
5 Other, specify ____________________

G. Household Facilities. Circle for each facility listed whether it is for households own use only, or shared, or not available.

	Own Use	Shared	None
Hot & cold running water	1	2	3
Flush toilet	1	2	3
Bathtub	1	2	3
Stove	1	2	3
Refrigerator	1	2	3
Kitchen	1	2	3

H. Circle below any other facilities in the household.

1 Radio
2 TV
3 Washing machine
4 Telephone
5 Car
6 Other, specify ______________________________

I. From your observation of the cleanliness and orderliness of this house how would you rate the general housekeeping on the part of the tenant over those things which can be controlled?

1 Neat and orderly--Good
2 Casual disorder--Fair
3 Obvious neglect and disorder--Poor

J. Was there a problem with adequate heat last winter?

1 Yes
2 No
3 N.A./D.K.

K. Is there a problem of rats or other vermin?

1 Yes
2 No
3 N.A.

L. Are any of the following a hazard to safety or health?

1 None
2 Falling plaster
3 Flooring
4 Plumbing
5 Broken windows
6 Ventilation
7 Electrical wiring
8 Heating equipment
9 Other, specify ____

III. RESIDENCE DATA

A. Length of time the head of household has resided in this area?

1 Less than one year
2 One year, less than three years
3 Three years, less than five years
4 Five years, less than 10 years
5 Ten years, less than 20 years
6 Twenty years and over

B. If head of household was not born here, ascertain reason why he came here.

1 Employment
2 Family
3 Education or training
4 NA
5 Other, specify______________________________

C. How long has the household lived in this apartment or home?

1 Less than 1 year
2 One year, less than 3 years
3 Three years, less than 5 years
4 Five years, less than 10 years
5 Ten years, less than 20 years
6 Twenty years and over

D. Determine attitude toward this neighborhood as a place to live.

1 Like
2 Don't like, want to move
3 Don't like, but accept
4 Indifferent
5 NA
6 Other, specify______________________________

Why? Comment:____

____

____

IV. ECONOMIC AND EMPLOYMENT

EMPLOYMENT OF HEAD OF HOUSEHOLD AND SPOUSE

	Code only in these two columns	
	H/H	Spouse
A. Currently employed?		
(1) Yes	1	1
(2) No, but in labor force	2	2
(3) DNA, not in labor force, e.g,. institutionalized, military, school, retired	3	3
(4) NA	4	4
B. Ever employed?		
(1) Yes	1	1
(2) No (IF NO FOR BOTH SKIP TO D)	2	2
(3) NA	3	3
C. Type of work past or present (write in job)	____	____
(1) Professional or semi-professional	1	1
(2) Proprietors, managers and officers	2	2
(3) Clerical sales and kindred	3	3
(4) Craftsman, foreman	4	4
(5) Farm owner, renter, manager	5	5
(6) Operators, kindred semi-skilled	6	6
(7) Farm labor or share croppers	7	7
(8) Service workers	8	8
(9) Unskilled labor	9	9
(0) None	0	0
(x) NA	x	x
D. Reason not employed		
(1) Business discontinued	1	1
(2) Laid off	2	2
(3) Moved away from place of employment	3	3
(4) Plant relocation	4	4
(5) Replaced by machine	5	5
(6) Acute illness/ accident	6	6
(7) Chronic illness/ long term disability	7	7
(8) Needed in home	8	8
(9) Retired	9	9
(0) Dismissed for cause	0	0
(x) Other, specify____________________	x	x
(y) NA	y	y

	Code only in these two columns	
	H/H	Spouse
E. Length of time on present or last job		
(1) Less than 6 months	1	1
(2) Six months, less than 1 year	2	2
(3) One year, less than 3 years	3	3
(4) Three years, less than 5 years	4	4
(5) Five years or more	5	5
(6) NA	6	6
F. Number of jobs in past 3 years	______	______
G. What is/was monthly income when working? Write in dollars	$______	$______
H. Have adults been in any of the following:		
(1) Basic literacy classes	1	1
(2) Pre-vocational training	2	2
(3) Vocational training	3	3
(4) Vocational rehabilitation	4	4
(5) None (SKIP TO K)	5	5
(6) Other, specify______________________	6	6
I. If H is answered, fill in as many as apply:		
(1) Currently in program (SKIP TO J)	1	1
(2) Completed course (SKIP TO J)	2	2
Dropped out due to:		
(3) Illness	3	3
(4) Child care problem	4	4
(5) Did not like teacher	5	5
(6) Too difficult, not interested	6	6
(7) Took a job, no time	7	7
(8) Transportation problem	8	8
(9) Other, specify______________________	9	9
J. Kind of job adult would like: (write in job)	______	______
(1) Anything	1	1
(2) Professional & semi-professional	2	2
(3) Proprietors, managers and officers	3	3
(4) Clerical sales and kindred	4	4
(5) Craftsman, foreman	5	5
(6) Farm owner, renter, manager	6	6
(7) Operators, kindred semi-skilled	7	7
(8) Farm labor and share croppers	8	8
(9) Service workers	9	9
(0) Unskilled labor	0	0
(x) Don't know(SKIP TO L)	x	x
(y) DNA	y	y

	Code only in these two columns	
	H/H	Spouse
K. Kind of training he thinks he would need for preferred job.		
(1) None	1	1
(2) Basic literacy	2	2
(3) Grade school only	3	3
(4) High school	4	4
(5) Vocational	5	5
(6) College	6	6
(7) On the job only	7	7
(8) Don't know	8	8
(9) DNA	9	9

L. How many full time wage earners are there in this household? ________

M. How many part time wage earners? ________

N. Does family receive income from any of the following:

1 Social Security
2 Unemployment Compensation
3 Pensions (government or private)
4 Other insurance
5 Workman's Compensation
6 Public Assistance
7 None
8 Other, specify________________________
9 NA

O. How much does family usually have to live on per month? $________

P. Is the amount in O the total income?

1 Yes
2 No (IF No, enter amount $______)

Q. How many people are supported by the income of the household? $________

R. If Public Assistance is received, what type of assistance?

1 ADC
2 OAA
3 MAA
4 AD
5 AB
6 GA
7 Other, specify________________________

S. Has the family bought on credit or installments during past year?

1 Yes
2 No
3 Don't know
4 NA

T. Does family have any debt due to medical care?

1 Yes
2 No
3 NA
How much? $________

U. How much debt does family have? $________

V. Does family consider debt a problem?

1 Yes
2 No
3 Sometimes
4 NA

V. DEPENDENCY

A. Have parents of head of household or spouse ever been on public assistance since 1960?

1 Yes
2 No
3 Don't know or remember
4 NA

B. Are there children over 18 out of household?

1 Yes
2 No (SKIP TO VI)
3 NA
4 DNA

If Yes, why?____

____

C. If B is Yes, are they receiving public assistance?

1 Yes
2 No
3 Don't know
4 NA

COMMENT:

VI. FAMILY RELATIONSHIPS

(IF NOT NOW MARRIED SKIP TO C)

A. Number of years married ______________

B. Assess the nature of relationship between husband and wife and code below

1 No serious marital discord
2 Serious marital discord
3 NA

C. Does the family feel they would like to discuss family problems with someone?

1 Yes
2 No
3 NA
4 Not sure
5 Other, specify____

D. Are there serious problems in relationship between adults and children in this family? (IF NO CHILDREN SKIP TO VIII)

1 Yes
2 No
3 NA

E. Ascertain if there are general problems related to children's behavior and child-rearing. (Multiple).

1 Children physcially neglected
2 Delinquency
3 Poor peer relations
4 Children in placement
5 Inadequate day care, pre-school
6 Inadequate day care, school age
7 Behavior problems
8 NA
9 Other, specify ____

____

F. Do parents appear interested in children?

1 Yes
2 Somewhat
3 No
4 NA

VII. CHILDREN'S SCHOOL AND BEHAVIOR

A. School Adjustment. Determine the number of children in school, dropouts and the nature of any school problems for other than children enrolled in continuum program and enter below.

	0 - 5 yrs.	6 -11 yrs.	12 - 17 yrs.
Number of Children	6	8	16
Number in School (or day care for 0 - 5)	7	9	17
Number of Dropouts (ANSWER B)		10	18
Number with School Problems		11	19
Learning		12	20
Truancy		13	21
Reading		14	22
Other school adjustment, specify		15	23

B. Why did child drop out? ____________________

C. Do parents believe children should finish high school?

1 Yes, all
2 Yes some, No some
3 No, all
4 Don't know
5 NA
6 Other, specify ____________________

D. Do parents expect children to complete high school?

1 Yes, all
2 Yes some, No some
3 No, all
4 Don't know
5 NA
6 Other, specify ____________________

E. What plans are made for after high school? (Code for oldest boy, or if no boy, code for oldest girl)

1 Armed forces
2 Job
3 Vocational training
4 College
5 Marriage
6 None
7 NA
8 Other, specify____________________________________

F. What do parents expect child to be when he or she is employed? (X if don't know; Y is NA, 0 if DNA) ANSWER FOR 4 OLDEST

Child 1 ________________________

Child 2 ________________________

Child 3 ________________________

Child 4 ________________________

G. How many children in this household are in the Continuum program?

1 One child
2 Two children
3 Three children
4 Four children
5 Five or more
6 NA/DK

H. Describe in detail:

1 Expectations of parents about program.
2 Experiences of parents with program.
3 Impact of the program as viewed by parents.

____

____

____

____

____

CODES FOR PHYSICAL AND MENTAL HEALTH GRID

(a) HAS CONDITION

Circle for any adult and child in household who currently has condition or impairment which frequently causes him pain or discomfort or limits activity.

(b) SOURCE OF TREATMENT (multiple)

Write in code number(s) for the source of treatment for each adult and child condition using the following codes:

1 No treatment
2 M.D. private
3 Clinic, OPD
4 Dentist
5 Social Worker
6 Druggist
7 Nurse
8 In institution, hospital, nursing home
9 Chiropractor
0 NA
x Lay person, healer
y Other, specify______________________
____

(c) CONSEQUENCES

Write in code numbers for every adult and child condition the actual effect on the person using the following codes:

1 None
2 Bed-ridden
3 Confined to house
4 Limited in employment
5 Limited in school
6 Limited in housework
7 Limited in care of children
8 NA
9 Other, specify______________________
____

(d) CONDITION WORSE

Circle if any reported condition has gotten worse in past year.

VIII. PHYSICAL AND MENTAL HEALTH

	(a) Has condition		(b) Source of treatment		(c) Consequences of treatment		(d) Has any condition gotten worse in past year
	adult	child	adult	child	adult	child	
A. CHRONIC CONDITIONS							
(1) Pulmonary (asthma, bronchitis, etc)	1	1					1
(2) TB	2	2					2
(3) Heart(high blood pressure, circulatory, etc)	3	3					3
(4) Stroke	4	4					4
(5) Arthritis & Rheumatism	5	5					5
(6) Cancer	6	6					3
(7) Diabetes	7	7					7
(8) Obesity	8	8					8
(9) Other, specify ______	9	9					9
B. IMPAIRMENTS							
(1) Deafness	1	1					1
(2) Visual	2	2					2
(3) Speech	3	3					3
(4) Neuro-muscular paralysis (Polio, MD, CP, etc)	4	4					4
(5) Missing limbs & physical deformities due to [illegible]	5	5					5
(6) Other physical impairments, specify ______	6	6					6
C. DENTAL	7	7					7
D. MENTAL HEALTH PROBLEMS							
(1) Behavioral & emotional	1	1					1
(2) Psychosis	2	2					2
(3) Senility	3	3					3
(4) Retardation	4	4					4
(5) Alcoholism	5	5					5
(6) Other, specify ______	6	6					6

E. If children in household, have they received innoculations or vaccine?
(IF NO CHILDREN SKIP TO L) (multiple)

1 Polio, all children
2 Polio, some children
3 Polio, no children
4 DPT, all children
5 DPT, some children
6 DPT, no children
7 Smallpox, all children
8 Smallpox, some children
9 Smallpox, no children
0 Don't know
x NA
y Other, specify________________________________

F. If child in household under one year, did they see a physician or go to a clinic in past year?
(IF NO CHILD UNDER ONE SKIP TO H)

1 No
2 Yes
3 Don't know
4 NA

If Yes, how many times?______________

If No, why not?________________________________

G. If woman was pregnant in past year did she see a doctor or go to a clinic before having baby?

1 Yes
2 No
3 Don't know
4 NA

If Yes, how many times?______________

If No, why not?________________________________

H,I,J,K --ONLY FOR WOMEN WITH CHILDREN UNDER 10 YEARS OF AGE

(If not applicable, SKIP TO L)

H. Does interviewee feel that she would like to have or have had more or less children?

1 Too many children
2 Plans more children
3 About right number
4 NA
5 Don't know
6 Other, specify____

I. Are there problems about the size of the family that concerns her?

1 Yes, specify____
2 No
3 NA
4 Other, specify____

J. Has she sought help in family planning?

1 Yes, and was helped
2 Yes, and was not helped
3 No
4 NA

If Yes, from whom?

1 MD
2 Clinic
3 Clergy
4 Druggist
5 Friend
6 Social worker
7 Other, specify____________________________

If No, why not?____

K. General comments, if any, by respondent on family planning________________

____

____

________________________________ ________________________________

L. How many days have all members of household been in a hospital in past year?__________

M. If medical care was given in past year does the interviewee believe it was satisfactory?

1 Yes
2 No
3 Don't know

If No, why?____

N. What health services does person feel are needed for this household which are not available? (multiple)

1 Doctor
2 Hospital
3 Medicine
4 Home nursing
5 None
6 Other home care, specify____________________

Why not?____

X. USE OF AGENCIES

A. Determine what agencies the household has had contact with during the past year and type of service sought and write in name of agency, code type of service and comment on whether person received help, was denied help and why, and was service helpful, etc.

FULL AGENCY NAME	TYPE OF SERVICE	COMMENT

TYPE OF SERVICE CODES

1 Medical, in-patient
2 Medical, out-patient
3 Financial assistance
4 Social service, counselling
5 Psychiatric
6 Recreational
7 Vocational
8 Child welfare
9 Probation, parole
0 Day care
x NA, don't know
y Other, specify____________________

B. List below any problems identified in this household (e.g., health, day care, financial need, school adjustment, etc.) that they have not sought help for and explain why not (e.g., don't know of resource, not nearby, can't afford, etc.)

TYPE OF PROBLEM	REASON HELP NOT SOUGHT

6______
7______
8______
9______
10______
11______
12______
13______
14______
15______

X. SUMMARY PROBLEM PROFILE

A. Housing

1 Housing seriously overcrowded
2 Housing unsanitary, unsafe
3 Housekeeping seriously neglected
4 Other, specify ______________________________

B. Economic and employment

1 Unemployed
2 Lacks skills
3 Inadequate income
4 Literacy problem
5 Poor work adjustment
6 Poor money management
7 Other, specify ______________________________

C. Marriage and family

1 Serious marital discord
2 Marital status unclear
3 Out-of-wedlock children
4 Serious family discord among unmarried adults
5 Parent-child relationship problem
6 Other, specify ______________________________

D. Children and education

1 School learning problems
2 Peer relationship problem
3 Behavior problem
4 Day care needed
5 Physically neglected
6 School drop-outs
7 Other, specify ______________________________

E. Aspirations

1 Lacks aspiration for adults
2 Lacks aspiration for children
3 Other, specify ______________________________

F. Physical health

1 Chronic health problem untreated, adults
2 Impairment untreated, adults
3 Chronic health problem untreated, children
4 Impairment untreated, children
5 Dental problem, untreated adults
6 Dental problem, untreated children
7 Family planning
8 Other, specify ______________________________

G. Mental health

1 Mental health problem untreated, adults
2 Mental health problem untreated, children
3 Other, specify ______________________________

H. Other

1 Legal problems
2 Socially isolated
3 Other, specify ______________________________

XI. PRELIMINARY SERVICE PROFILE OF SERVICES NEEDED

	Service is needed
A. Counselling Services	
(1) Family relationships	1
(2) Clarification of marital status	2
(3) Financial planning and budgeting	3
(4) Use of community resources	4
(5) Child behavior and/or school adjustment	5
(6) Child rearing	6
(7) Other, specify ____________	7
B. Employment and Economic Service	
(1) Vocational counselling and/or testing	1
(2) Help in money management	2
(3) Financial assistance	3
(4) Other, specify ____________	4
C. Health Services	
(1) Physical evaluation/care--adult	1
(2) Physical evaluation/care--child	2
(3) Mental evaluation/care--adult	3
(4) Mental evaluation/care--child	4
(5) Visiting nurse service	5
(6) Family planning	6
(7) Vocational rehabilitation	7
(8) Other, specify ____________	8
D. Other Services	
(1) Education in homemaking & housekeeping	1
(2) Day care	2
(3) Literacy, basic ed.	3
(4) Recreation/informal education and social activities	4
(5) Homemaker or housekeeper service	5
(6) Friendly visiting	6
(7) Legal aid	7
(8) Other, specify ____________	8

Comment: ____

____

____

____

APPENDIX VI

Informal Interviews

Informal Interviews

The following questions should be used as guides for informal interviews with school administrative personnel, school board members, staff members and non-teaching persons. These questions should be used as guides or areas of inquiry and not as specific questions.

Also included in this section are suggestions on tabulating and recording this information. The data can be collected and organized by individual respondents or by areas. We suggest the former.

1. Are policies and procedures clear and understandable?
2. Approval of the basic idea of the continuum? If not, why?
3. Are the program requirements enforced from above? Does this person enforce them?
4. Is technical assistance available?
5. Satisfaction with feedback about the program.
6. Satisfaction with pre-program orientation.
7. Understanding of pilot project.
8. Satisfaction with operation of the program.
9. Attitudes toward teacher training program for pilot study.
10. Experience with parents about pilot study.
11. Satisfaction with State's role in pilot program.
12. Specific impact of pilot program.
13. Attitude toward poor people and minority groups.
14. Attitudes toward special needs children.
15. Impact of the program on staff relations.
16. How program can be improved.

APPENDIX VII

SCHEDULE FOR PHASING-IN THE PILOT STUDY

TIME SCHEDULE FOR TRAINING OF TEACHERS, ORIENTATION OF OTHER PERSONNEL, IDENTIFICATION OF POPULATION AND IMPLEMENTATION OF CONTINUUM OF PROGRAM DESIGN

Summer 1969

A six-week workshop with practicum experience for 30 teachers. (Six hours of college credit with Loyola College, Baltimore.)

Title of Course: "A Continuum of Special Education Services; Diagnostic and Prescriptive. Teaching with Psychological Aspects for Handicapped Children."

Autumn 1969

1. Choosing the six experimental and control elementary schools - (K-3rd)
2. Selection of advisory committee
3. Selection of evaluation team in each school
4. Development of more definite guidelines and standards for the various programs
5. Orientation of entire faculty in the participating schools
6. Orientation of ancillary personnel
7. Bi-monthly seminars for the 30 teachers who will participate in the implementation of the Continuum
8. Observation of teachers by project staff
9. In-Service meetings with teachers, principals and other personnel
10. Final selection of tests for screening and identification
11. Selection of tests to measure academic achievement and behavioral change

Winter-Spring 1970

1. Screening of population (K-3)
    a. Referral from teachers, principals, psychologists, pupil personnel, etc.
    b. Reevaluating pupils placed in self-contained special classes
    c. Pre-testing for final selection of the population for the purposes of tentative placements in one of the five programs and for analysis of measure of achievement and behavioral change

d. Preparing learning profiles for each subject

Summer 1970

1. A six-week workshop, with practicum experience, for the 30 teachers initially chosen to participate in the project.
2. Placing teachers in appropriate programs (II, III, IV, V) according to competencies observed and evaluations made by the project staff. (Twelve additional teachers were selected for training because of the attrition factor or inability to perform the functions inherent in the program design)
3. Making final plans with school personnel and others concerned with the project implementation.

School Year 1970-71

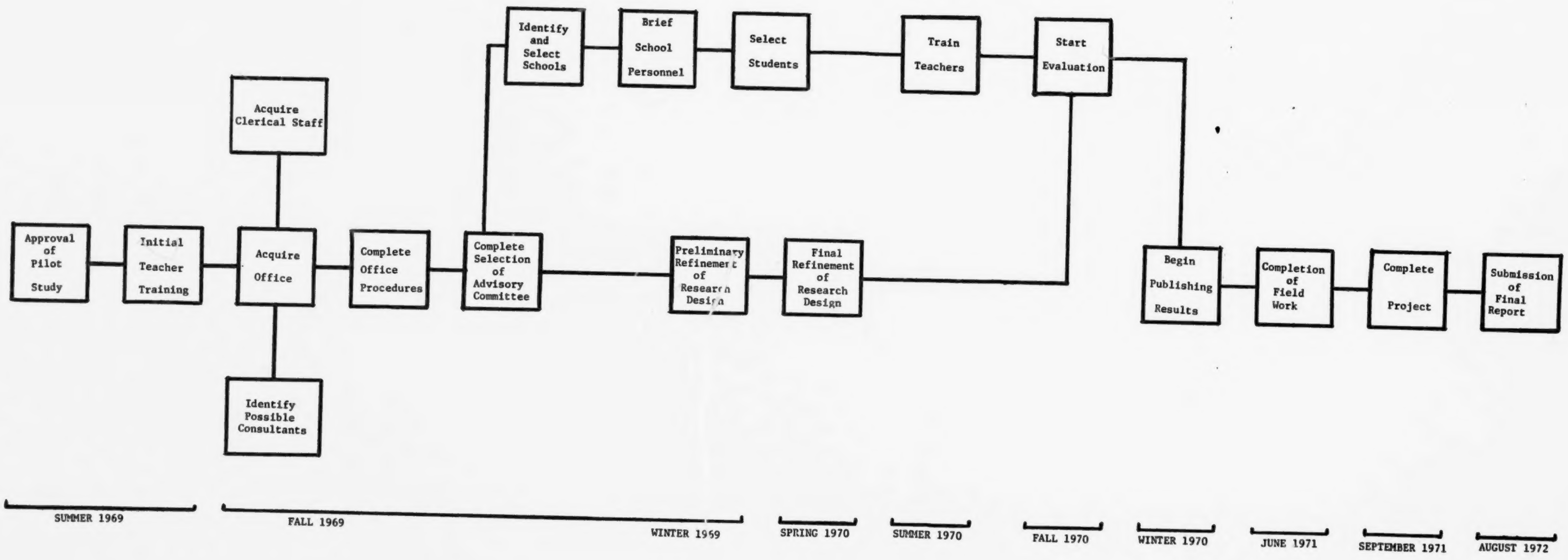
Continuation of Pilot Project

September 1971 - August, 1972

1. Implementing the Pilot Study
2. In-Service meetings with teachers and other staff members
3. Post-testing and analyzing final results
4. Publishing final report

TABLE VIII.

SCHEDULE FOR DEVELOPMENT AND CONDUCT OF RESEARCH DESIGN


Approval of Pilot Study
Initial Teacher Training
Acquire Clerical Staff
Acquire Office
Identify Possible Consultants
Complete Office Procedures
Complete Selection of Advisory Committee
Identify and Select Schools
Brief School Personnel
Select Students
Train Teachers
Start Evaluation
Preliminary Refinement of Research Design
Final Refinement of Research Design
Begin Publishing Results
Completion of Field Work
Complete Project
Submission of Final Report
SUMMER 1969
FALL 1969
WINTER 1969
SPRING 1970
SUMMER 1970
FALL 1970
WINTER 1970
JUNE 1971
SEPTEMBER 1971
AUGUST 1972

APPENDIX VIII

COST COMPARISONS BETWEEN THE PRESENT PROGRAM OF SERVICES AND THE CONTINUUM

COST COMPARISONS

Tables IX and X compare the expected cost comparisons on a statewide level between special education as presently structured and under the proposed continuum. Assuming the same number of students enrolled (28,661), the actual costs for all programs this fiscal year were $10,778,800 (not depicted in the tables); under the continuum, the cost will be $9,954,650, or a net "savings" of $824,150.

These data are somewhat tentative because of the variety of variables involved. For example, the continuum should reach more children than the present program; hence, total cost for the continuum could be higher than anticipated. However, the key factor is cost per student; Table IX, indicates that in four of the programs, the continuum results in substantial cuts on a cost per student basis.

Table XI explains the actual budget for state aid to special education programs for Fiscal Year 1968-1969.

TABLE IX.

COST PER STUDENT COMPARISONS FOR FISCAL YEAR 1968-1969 PROGRAMS AND UNDER PROPOSED CONTINUUM

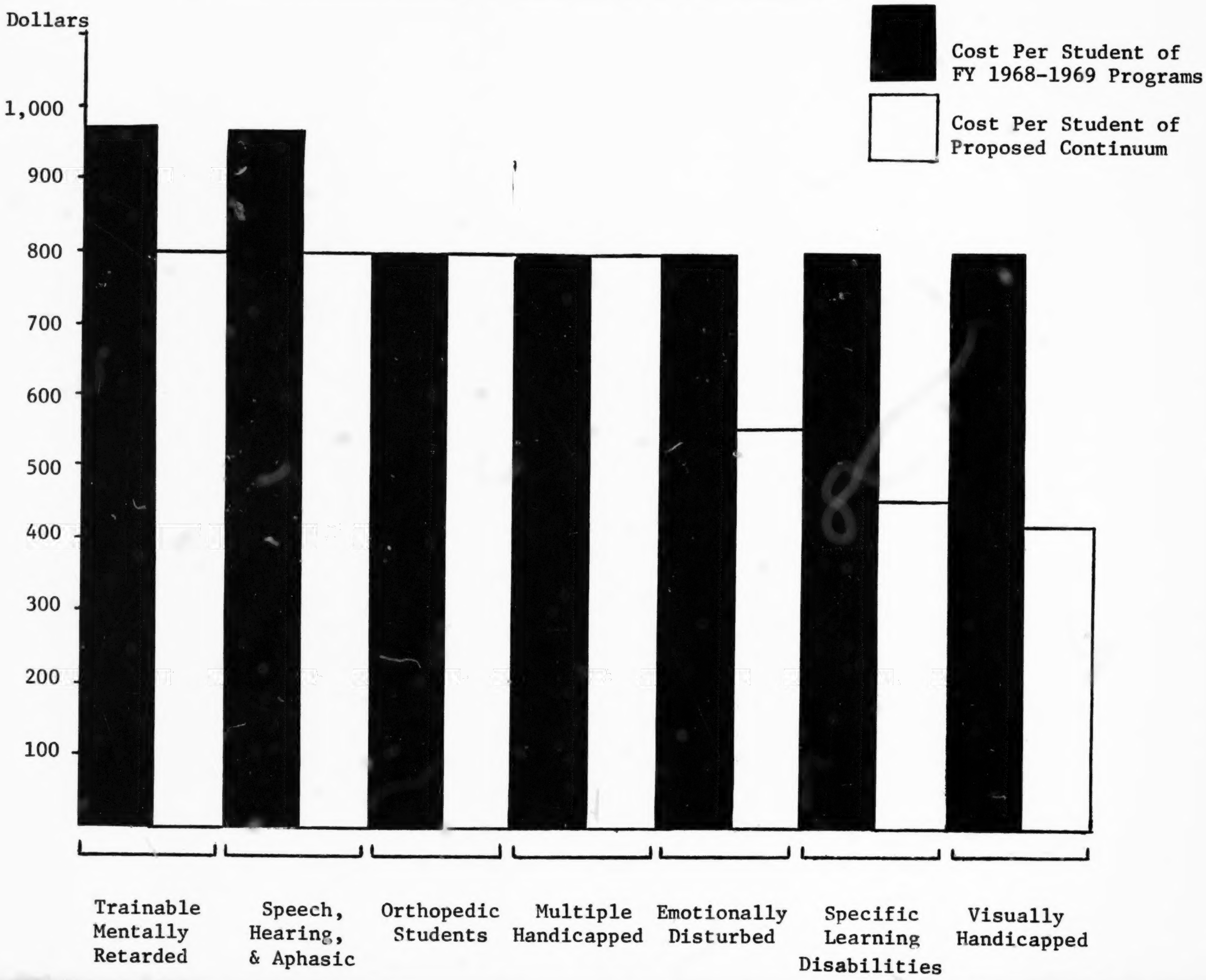


TABLE X.

PROGRAM COST COMPARISON

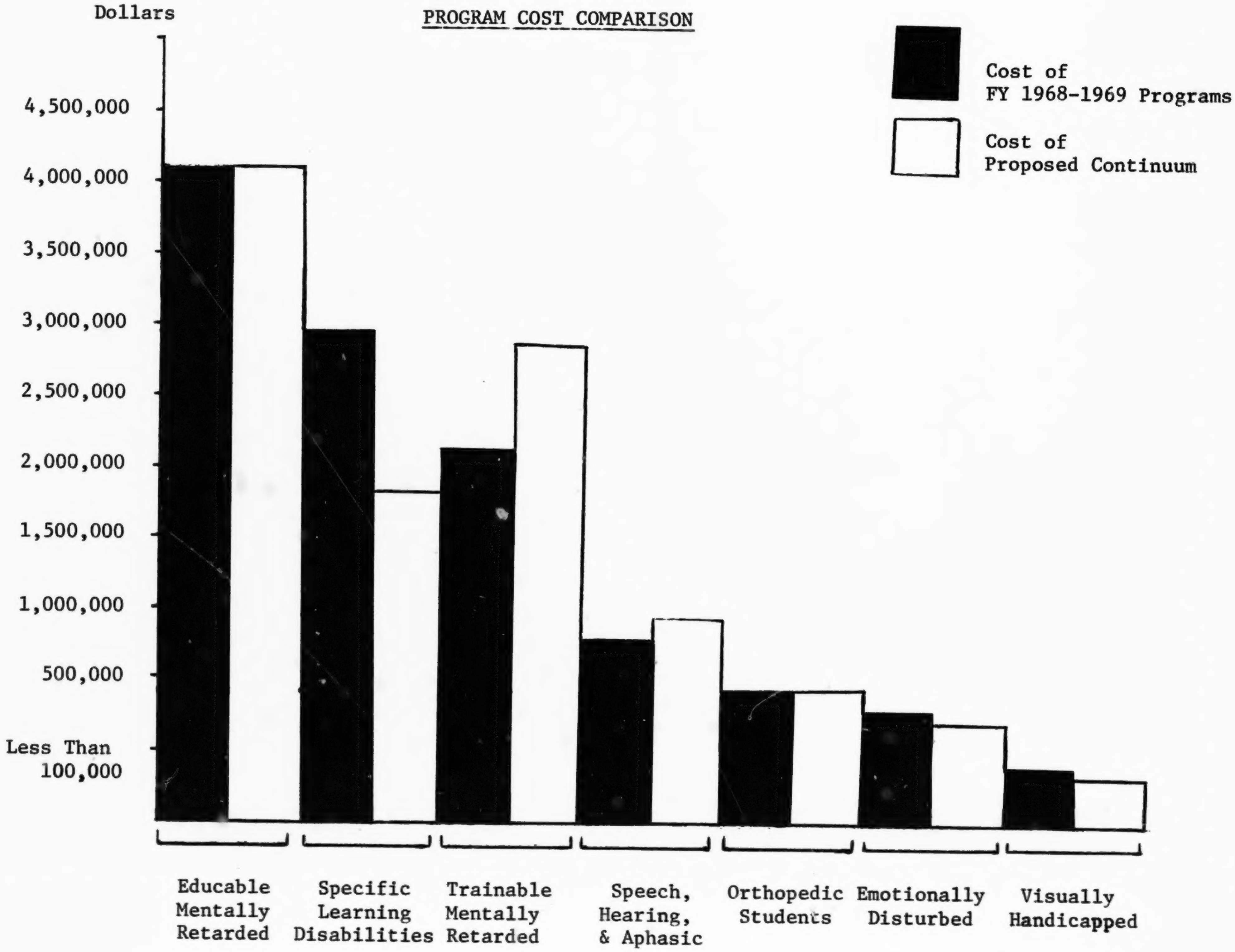
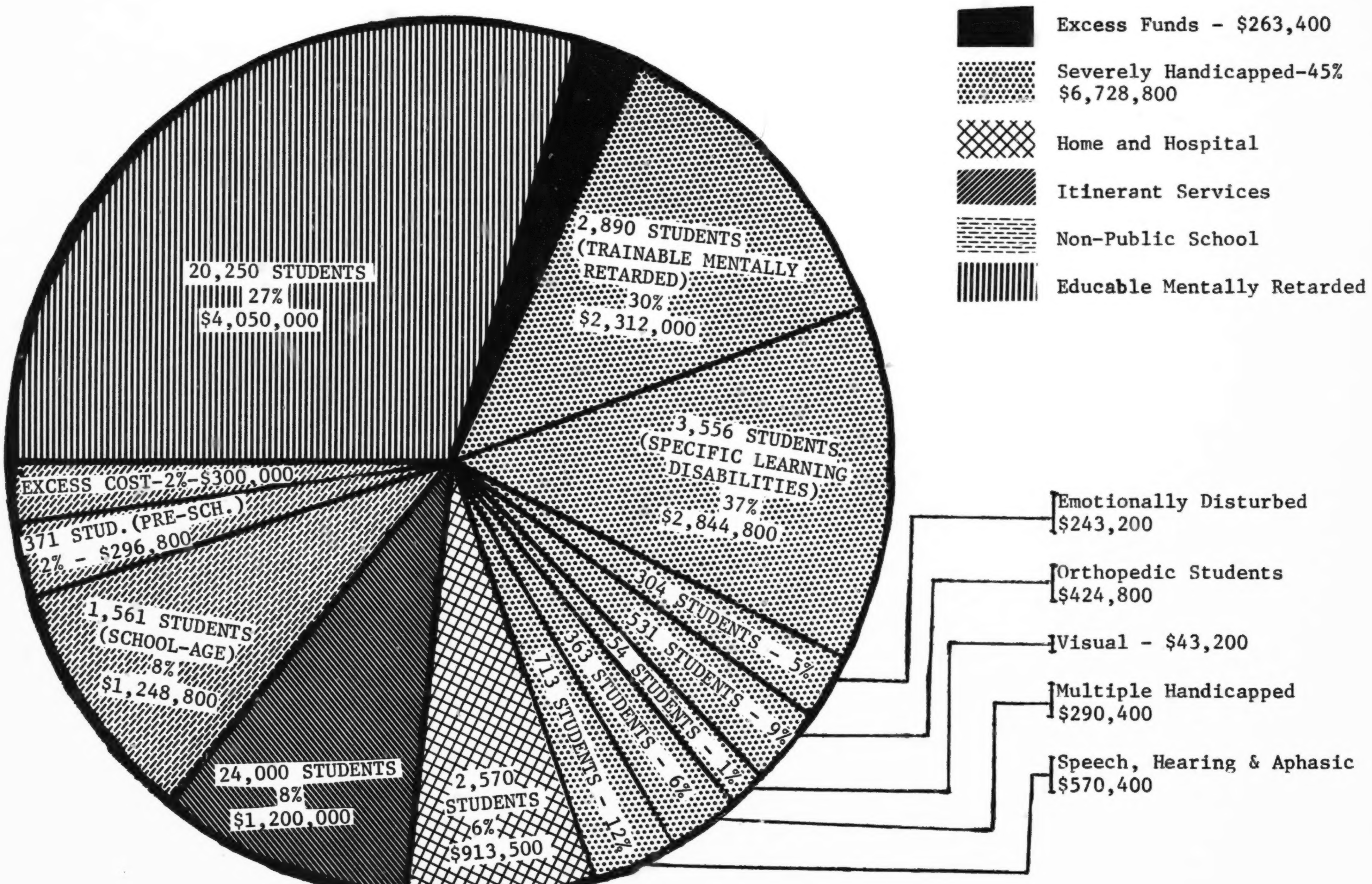


TABLE XI.

ACTUAL 1968-1969 SPECIAL EDUCATION STATE AID BUDGET



APPENDIX IX

COST FORMULA

TABLE XI.

CONTINUUM OF PROGRAM DESIGN:

COST FORMULA

PROGRAM I

CONSULTANT SERVICES

PSYCHOLOGIST
GUIDANCE COUNSELOR
PUPIL PERSONNEL
PUBLIC HEALTH NURSE

.2 INDEX = 20%
* ($130)

PROGRAM II

DIAGNOSTIC PRESCRIPTIVE SERVICES

DIAGNOSE AND PRESCRIBE EDUCATIONALLY FOR ASSISTANCE TO REGULAR CLASSROOM TEACHER.

.5 INDEX = 50%
* ($320)

PROGRAM III

ITINERANT SERVICES

COMMUNICATIVE DISORDERS
VISUALLY HANDICAPPED

.2 INDEX = 20%
* ($130)

PROGRAM IV

COOPERATIVE SERVICES

(RESOURCE ROOM)
TUTORIAL-REMEDIAL
CRISIS TEACHING

1.0 INDEX = 100%
* ($640)

PROGRAM V

SPECIAL CLASS SERVICES

SELF CONTAINED UNIT FOR SEVERELY HANDICAPPED

1.5 INDEX = 150%
* ($960)

PROGRAM VI

NON-PUBLIC SPECIAL DAY CLASSES

HOME AND HOSPITAL TEACHING

1.5 INDEX = 150%
* ($960)

PROGRAM VII

RESIDENTIAL SERVICES

PRIVATE
PUBLIC

1.5 INDEX = 150%
* ($960)

PUPIL DESIGN WEIGHTING BASIS: REIMBURSE ON NUMBER OF PUPILS X AVERAGE STATE PER PUPIL COST + DESIGN VALUE WEIGHTING.

* BASED ON AVERAGE COST PER CHILD IN REGULAR SCHOOL PROGRAM.

APPENDIX X

A FRAMEWORK FOR A COST-EFFECTIVENESS ANALYSIS OF THE PILOT STUDY*

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*Adapted from Social, Educational Research and Development, Inc.; Final Report: An Identification and Analysis of Effective Secondary Level Vocational Programs for the Disadvantaged; Contract Number OEC-0-8-089015-3344(010); December, 1968.

A FRAMEWORK FOR A COST-EFFECTIVENESS ANALYSIS OF THE PILOT STUDY

Cost-effectiveness analysis offers a frame of reference designed to investigate the competing claims of alternative means of achieving the same objective--in this case, the effectiveness of the pilot study in improving the education and social completeness of the children in the continuum.

This program will experience at least two major difficulties in applying cost-effectiveness analysis. First, the analysis must be directly related to the objectives being served by alternative programs. Thus, proper definition of objectives is essential. Ill-conceived specification of objectives as well as ill-conceived choice and construction of indices to measure the attainment of these objectives will result in a failure of the analysis to provide information in making choices among competing alternatives. Second, it is essential to gather as much cost data as is possible and this is not always easy to do.

Analysis of costs or benefits in isolation cannot provide information in making choices. Costs and benefits of the entire program, however its limits are defined, must be considered in conjunction for any evaluation of alternative programs or actions. The net effectiveness of any program is due to the joint effect of costs and benefits as these have their impacts over time.

These are the steps to follow:

1. Objectives of the program or competing set of programs must be specified.

2. Processes or activities to implement the program objectives must be developed (the pilot program).

3. An index or indices of performance of the activities which are intended to measure program effectiveness must be specified.

4. An educational production function must be specified by which the educational output of any given program can be related to a set of related educational inputs.

5. A cost function based on the educational production function given for each activity must be specified.

6. A comparison between benefits (performance indices) and costs must be performed.

These points will be considered in turn:

1. Stating Objectives. Specification of program objectives is critical to any comparative analysis of the pilot program.

For example, page 20 lists the objectives of this pilot study. This analysis concentrates primarily on objectives 1-a, 1-b, 1-c, 1-d, and perhaps 1-e, 2-a, 2-b, 2-c, 2-e, 2-f, 2-g. 2-h, 2-i, 2-j, 2-k, 1-f, and 1-g.

However, not all these objectives can be measured with the same precision ease. Also as stated, these objectives are too broad. For each grade level or setting, they must be broken down into empirical components.

In other words, if improved educational performance is one of the elements contributing to social or private well-being, educational performance must be expressed in terms of some measurable quantity. For a given program, educational performance is maximized by minimizing cost (monetary and non-monetary) subject to some specified level of gain or by maximizing some particular benefit subject to some specified level of cost.

When educational achievement occurs, the first step has been accomplished in seeking educational performance if it has maximized the net addition to grade level relative to cost. Yet, once this is done, only one aspect of well-being for the child has been optimized and the single-minded pursuit of this objective may result in a reduction in additional benefits to be achieved from other objectives on which the total well-being of the student depends. The interrelationships of these objectives must be borne in mind.

Cost effectiveness analysis of education is always partial; the analysis of any given educational activity or program must be partial in scope. This limitation of cost-effectiveness analysis must be stressed. For instance, one must not lose sight of the fact that maximizing the net improvement in grade level performance of a special need youth participating in the pilot program is not the same thing as maximizing the overall well-being of the student or to society which results from the program. And also, it must be stressed that maximizing the net improvement in grade level performance due to the program does not necessarily imply an equal net addition to educational performance as a whole. There may be ways in which the pursuit of objectives at a lower (higher) level in a program actively conflicts with or contradicts the pursuit of objectives at a higher (lower) level in the overall context of an educational program.

2. Implementing Objectives. This concerns the development of alternative activities to pursue objectives. These activities can encompass different ways of pursuing the same activity in order to achieve a given program objective. Or, they can involve two or more different activities to achieve the given program objective. In the first case if the program objective is, for instance, to maximize the improvement in grade level performance, one may develop different curricula in order to see which curriculum, for a given cost, yields the maximum improvement in grade level. For instance, other things equal, how is knowledge of mathematics most efficiently imparted to the children--by the teacher in person, through special programs, by teaching machines, or by television instruction? Or, what is the optimum size of class,

other things equal, for miximizing performance on some standard performance test or set of tests. It is possible that for these children small class size with personal attention by specially trained teachers would be least costly in terms of the additional benefits gained even though the total cost might be higher than the total cost of using say, teaching machines. This is so because the effectiveness of a program is judged in terms of the additional or extra, not total, benefits to be gained from the additional, not total, increase in costs.

3. Specification of the Performance Index. Once activities are chosen which are related to the objectives of the program, the next problem is to develop an index or set of indices to measure performance. However, an index can only be an approximate measure of the output of the activity. What, for instance, is the output of the activity? What, for instance, is the output of a special program? Is it the number of graduates? Is it the creation of educated persons? What is the nature of education as an output? Is it the ability to reason? Is it the ability to recognize and appreciate the "Good"? Clearly, the definition of the education output is crucial, for a program or activity must be organized and defined in terms of its desired output.

   What is an index for measuring educational output? If the output of education is the acquisition of a store of knowledge and the ability to reason, then performance on a standard test to measure these two components of educational output may be an appropriate index. But, again, it will be an approximate measure since it will never be conceptually nor practically flawless. For instance, no test can measure all aspects of reasoning ability or knowledge. In addition, it is difficult to distinguish between that ability to reason which is innate and that which is developed through the learning process. Finally, no test can measure ability to reason independent of one's stock of knowledge because a basic store of knowledge is needed as a frame of reference for all reasoning. It is not necessary to multiply further examples to demonstrate the complexity of this problem.

4. The Educational Production Function. The production function specifies the educational output, or outputs, the physical inputs, and the relationship between inputs and outputs, and, in some cases, interrelationships between subsets of inputs. This function or relationship would show the various combinations of inputs which can be used to produce a given level of educational output. It should also show how a given educational output increases or decreases as the relative proportion of inputs changes.

   The general form of a production function is as follows:

   (1) $X=f(a,b,c,d)$ where X is educational output and $a,b,c,$ and d are educational inputs.

If the grade level improvement of students defines the output of a program, then the inputs could be the number of teachers of a given quality and type, number of classrooms, kilowatt hours of electricity, number of administrative staff, amounts of different supplies and so forth. Finally, this flow of educational inputs which creates the flow of educational outputs must be related to time.

5. The Cost Function. It should be possible to measure each of these inputs of the educational production function in terms of money cost. The production of a school or of any educational activity and the prices of inputs determines the cost function. For this cost function, it is possible to estimate a total cost of any given activity and also, a marginal cost; that is, the extra cost of producing an extra unit of output. Thus, if output is defined as an index of performance on a standard test, and if the unit of observation is a special needs student who has achieved a standard level of performance on the given test, then the total costs of achieving that level of performance can be estimated for a given number of special needs students. And, given that costs are related to the student, the marginal(extra) cost of training an additional (extra) student at that level of proficiency can be estimated.

   Other relationships which are not cost relationships can also be estimated. For instance, test performance or the probability of graduation or of not dropping out can be expressed as a function of expenditure per student as well as student characteristcs such as sex, race, IQ, family background, and school characteristics, such as teacher quality, size of school, school location and other variables. In such an estimated relationship (again, this is not a cost function), one can calculate the net contribution of these education inputs (as these are measured in dollars) to test performance or the probability of graduation or of not dropping out. Of course, the contribution of each of these inputs is net only in terms of the other elements expressed in the estimated relationship.

6. Relation of Costs to Benefits. If benefits are non-monetary in nature, then a target level of program performance can be set and that activity which achieves the performance target at the lowest cost (both monetary and non-monetary) is the desirable program. Or, a given cost can be set, and that program which achieves the highest performance level is the desirable program.

   This framework for evaluating an educational activity or project, whether for special needs children or any other educational population, is completely general. Given that objectives are clearly specified, alternative projects to achieve these objectives can be established. Input combinations between alternative projects will likely vary. Input combinations within a given project can be varied. The effects of these two types of variation can be noted on both output and on input costs. The combination of inputs, for a given cost, which will then maximize a given output, can then be discovered.

B. An Index of Program Performance

Cost-effectiveness analysis, as stated above, is a partial analysis economist's viewpoint is to compare relative test performance of pupils being taught by different techniques, but at the same marginal cost outlay for each technique. Then that technique having the highest relative score can be said to be more efficient and effective.

In short, in the strictest terms his study shows the net change in test performance for a change of a given unit of expenditure, but this does not indicate how efficient a particular school is in teaching that subject to a student. And of course, expenditure itself is not a measure of quality, since different expenditure levels may simply represent different combinations of teaching inputs among alternative techniques while saying nothing about the resulting output levels among techniques. To summarize the findings of Kiesling, the estimated relationship between test performance and expenditure appears to be linear and upward sloping, though in some cases the net relationship is similar to that expressed in Figure 1. Finally, he states that:

> After allowing for these control variables (X_1, X_3, and X_4 above), it was often found. . . that an additional $100 of expenditure per pupil (in ADA) was associated with between .1 and .2 of a standard deviation in the dependent variable. This is no small effect.[5/]

What does this $100 of expenditure represent? It represents the average input mix of instructional inputs for either the sample as a whole or for the sample subsets for which he estimates relationships. The reader does not know what this input mix is. And, he has no information on how changes in the input mix that can be bought for $100 will affect performance scores. Thus, his statement "This is no small effect" does not have any useful meaning. Small relative to what?

Of course Kiesling's study is not a cost-effectiveness study, so that this criticism is, to an extent, unfair. But the criticism is not unfair to the extent that Kiesling purports to be discussing educational quality.

In contrast, the Coleman Report (Equality of Educational Opportunity), which is based on the same Project Talent Data which Kiesling uses, finds that

> . . . the social composition of the student body is more highly related to achievement, independently of the student's own social background, than is any school factor. [6/]

Further, the findings can be summarized as expressing the phenomenon that

> . . . per pupil expenditures, books in the library and a number of other facilities and curricular measures show very little relation to achievement if the social background and attitudes of individual students and their schoolmates are held constant. [7/]

[5/] Ibid., p. 132.

[6/] Coleman, et.al., op.cit., p. 325.

[7/] Samuel Bowles and Henry Levin, "The Determinants of Scholastic Achievement - An Appraisal of Some Recent Evidence," The Journal of Human Resources, Winter, 1968, p. 4. See also Coleman's reply to this critique in the Spring 1968 issue of the Journal. Also to be published by Bowles and Levin in the Summer 1968 issue of the same Journal is their, "Equality of Educational Opportunity: More on Multicollinearity and the Effectiveness of Schools." Forthcoming.

Thus, while different subsets of the same data set were used, the two authors come to contradictory conclusions. The difference is, in part, due to the fact that the "Coleman Report" includes a considerably large number of independent variables in the estimated equations. But, perhaps the difference is more apparent than real, since as Bowles and Levin point out, the Coleman Report finds a significant relation between achievement and teacher's characteristics. And teacher's characteristics account for 75% of the variation in teacher's salaries. And the teacher's salaries dominate the institutional expenditures category.[8]

Also, Kiesling used a dummy form for his expenditure variable, breaking expenditures into $50 ranges. The Coleman Report used a linear continuous variable form. There is some evidence that the empirical functional relationship between learning performance and expenditure is not linear. Economic theory would support this non-linear relationship on *a priori* grounds also. Thus, if Kiesling's formulation more closely approximates the true functional relationship, which it probably does, his estimations will have a higher degree of statistical significance.

Also, the manner in which the regression analysis was conducted imparted a bias to the findings on the relation between achievement and expenditure in the Coleman Report. The technique in the Coleman Report was to add each independent variable in a stepwise fashion and then display the difference between the coefficient of multiple determination for the equation with a given variable in it and the coefficient of multiple determination for the same equation, but excluding the variable in question. This procedure is only valid if the set of independent variables are completely independent of each other. But such is not the case for the variables in this study. School characteristics, student charcateristics, and expenditure levels are all intercorrelated. Thus, the order in which variables are introduced into the equation will affect the observed difference in the coefficients of determination. It is, then, possible to structure the order of independent variables so that, say, variable two which is added after variable one, but which is highly correlated with it, adds little or nothing to the explanatory value of the overall relationship. Finally, the Coleman Report does not display the partial regression coefficients so that one cannot determine the amount by which a unit of expenditure affects test performance.[9] The emphasis was on the coefficient of multiple correlation which does not give one very efficient insights into the structural interrelationships among the variables.

Neither of these two studies provides the data analysis necessary to make choices among competing educational alternatives, though the Coleman Report presents information which would tempt one (erroneously) to make economic judgments. Of the two, the Kiesling study appears to be more consistent with the needs of economic analysis.

8/ Bowles and Levin, "The Determinants of Scholastic Achievements," *op.cit.*, p. 10.

9/ *Ibid*.

D. Summary

This discussion presented a framework for evaluating the pilot study. The framework was presented in the context of economic analysis, sometimes known as systems or cost-effectiveness analysis. It can deal with efficiency problems concerning both economic and non-economic outputs. In the pilot study, the theoretical conception should stress the relationship between costs on the one hand and educational increments and other indices of effectiveness on the other.

These decisions will have to be made:

1. What "benefits are to be used. We suggested three knowing many are omitted.
    a. net increase in social adjustment
    b. net increase in grade reading level
    c. reduction in transfer out or turnover
2. "Cost" indices to be used. Should capital expenditures as well as current costs be used?

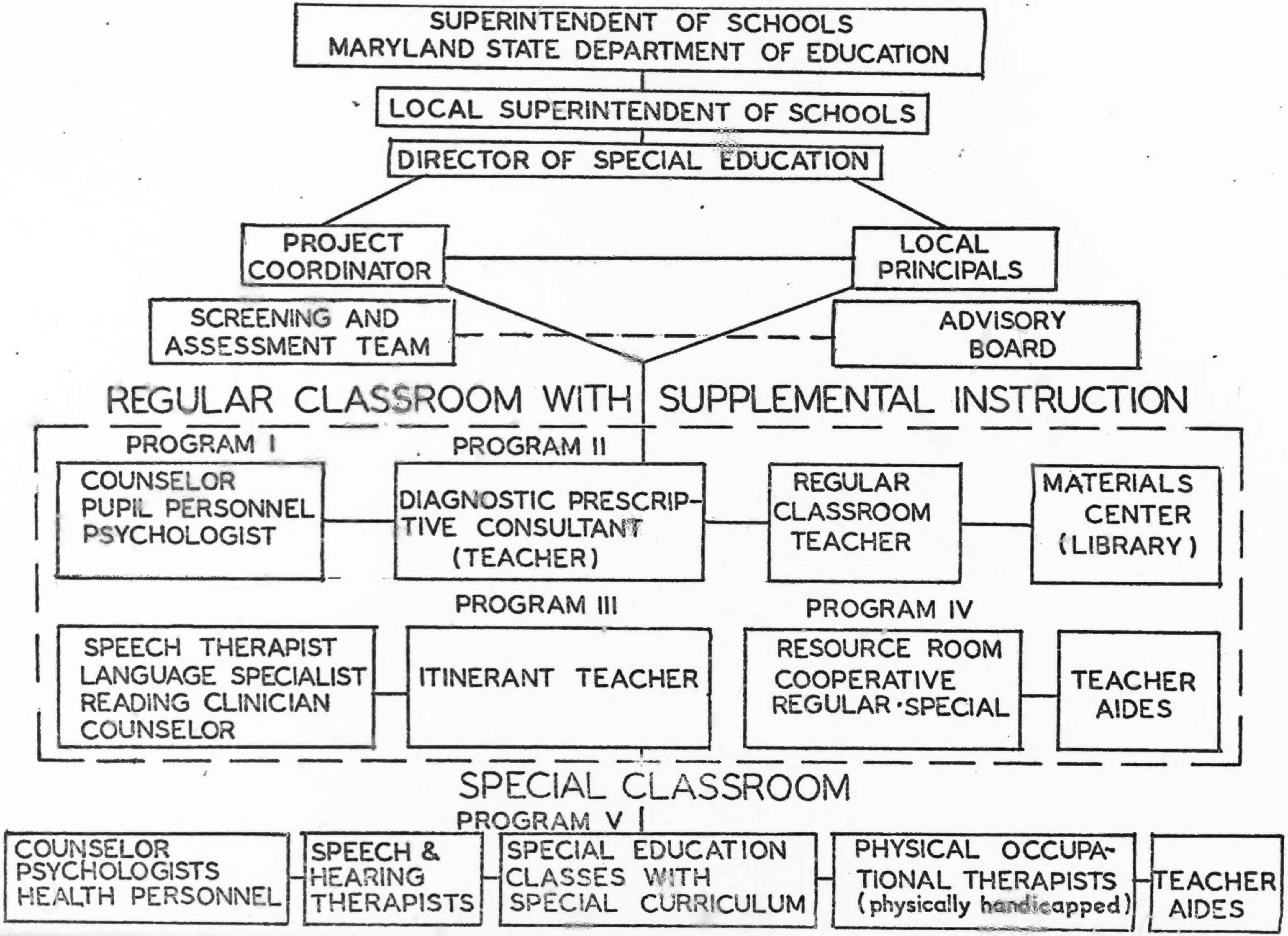
We think this aspect of the evaluation will be very important. However, it is exceedingly technical and special assistance will be necessary from the beginning. A specialist should be able to ascertain what cost data is readily available in the schools and the effectiveness with which it can be gathered once the actual schools are selected.

APPENDIX XI

OVERALL ADMINISTRATION

TABLE XIII.

SPECIAL EDUCATION CONTINUUM OF PROGRAM DESIGN ADMINISTRATIVE PLAN CHART


SUPERINTENDENT OF SCHOOLS
MARYLAND STATE DEPARTMENT OF EDUCATION
LOCAL SUPERINTENDENT OF SCHOOLS
DIRECTOR OF SPECIAL EDUCATION
PROJECT COORDINATOR
LOCAL PRINCIPALS
SCREENING AND ASSESSMENT TEAM
ADVISORY BOARD
REGULAR CLASSROOM WITH SUPPLEMENTAL INSTRUCTION
PROGRAM I
COUNSELOR
PUPIL PERSONNEL
PSYCHOLOGIST
PROGRAM II
DIAGNOSTIC PRESCRIPTIVE CONSULTANT (TEACHER)
REGULAR CLASSROOM TEACHER
MATERIALS CENTER (LIBRARY)
PROGRAM III
SPEECH THERAPIST
LANGUAGE SPECIALIST
READING CLINICIAN
COUNSELOR
ITINERANT TEACHER
PROGRAM IV
RESOURCE ROOM
COOPERATIVE
REGULAR·SPECIAL
TEACHER AIDES
SPECIAL CLASSROOM
PROGRAM V
COUNSELOR
PSYCHOLOGISTS
HEALTH PERSONNEL
SPEECH & HEARING THERAPISTS
SPECIAL EDUCATION CLASSES WITH SPECIAL CURRICULUM
PHYSICAL OCCUPATIONAL THERAPISTS (physically handicapped)
TEACHER AIDES

APPENDIX XII

RECOMMENDED RESEARCH INSTRUMENTS

The following list presents the most appropriate instruments for the study. Not all will be necessary.

Recommended Research Instruments

The instruments which are recommended are related to the research objectives enumerated in the Research Development Plan. In some instances, more than one test or scale is suggested, from which the Project Director may choose. In other areas, no satisfactory measurement device has been identified and the research staff will have to develop such instruments expressly for the purposes of the project.

INTELLIGENCE

The Wechsler Intelligence Scale for Children: This is an individually administered test for children from age 5 to 15 which takes 40 to 60 minutes to complete. It provides 15 scores: Verbal: information, comprehension, arithmetic, similarities, vocabulary, digit span-optional and total verbal score; Performance: picture completion, picture arrangement, block design, object assembly, mazes-optional, coding, total performance score and deviation IQ.

The Kuhlmann-Anderson Intelligence Test: This is a group test which takes from 45 to 60 minutes to administer and is suitable for children from kindergarten through 12th grade. The Seventh Edition provides a verbal score and a quantitative score. The test booklets may be reused and IBM answer sheets may be scored mechanically.

The Peabody Picture Vocabulary Test: This is an individual test, administered in 15 minutes or less, for children aged 2.5 to 18. The examiner needs no specialized preparation or training and no special equipment is necessary. This test is essentially a well-standardized estimate of verbal intelligence, in which the subject indicates in some fashion which one of four pictures best fits the stimulus word which is read aloud to him. It may prove to be particularly useful with handicapped children.

ACHIEVEMENT

The Wide Range Achievement Test: This is an individual test which can be administered by a teacher in 20 to 45 minutes to children from kindergarten through college. It tests reading, spelling, and arithmetic and has been widely used in research in special education. It has practical value in a public school setting because of its brevity and because personnel are not required to administer it.

PERCEPTUAL DEVELOPMENT

The Rosner-Richman Perceptual Survey: This is an individual test which can be administered by a teacher or a para-professional in about 15 minutes to children aged 5 to 12. It is a screening device which provides information about the child's ability to process concrete information. It samples his general perceptual-motor abilities, auditory-motor skills, visual-motor skills and his integrative abilities. The Rosner Perceptual Survey, a longer form of the instrument, requires the skills of a vision specialist and probes the child's functional visual abilities.

GENERAL PERSONALITY

California Test of Personality: This instrument can be used with children from kindergarten through high school and takes from 45 to 60 minutes to administer. It yields 16 scores: self-reliance, sense of personal worth, sense of personal freedom, feeling of belonging, withdrawing tendencies, nervous symptoms, total personal worth, social standards, social skills, anti-social tendencies, family relations, school relations, occupation relations, community relations, total social adjustment and total adjustment. It is considered to be among the better personality tests available.

(NOTE: In the following descriptions, there may appear to be some overlapping of measurement efforts. Each instrument, however, has a discrete emphasis.)

SOCIAL ADJUSTMENT

Syracuse Scales of Social Relations: This is essentially a sociometric device, for use with children from 5th grade through the 12th. It takes 50 to 65 minutes in two sessions to administer. It provides information on how each pupil views his classmates as being able to satisfy two of his important psychological needs, and how each pupil is evaluated by his classmates as being able to satisfy their needs.

The Social Awareness Scale: Developed by the Maryland State Department of Education research staff, this scale measures changes in interpersonal relationships, personal effectiveness in a social situation, and problem-solving skills.

A Process for In-School Screening of Children with Emotional Handicaps: This screening battery can be utilized with children from kindergarten through high school. The process involves a combination of three techniques: behavior rating by the teacher, peer ratings by classmates, and self-ratings.

The Bristol Social-Adjustment Guides: Two of the four scales are recommended for consideration in this project: "The Child in the School" is a behavior checklist which takes 10 to 20 minutes to complete. "The Child in the Family" measures the number and severity of adverse factors in the child's situation and the degree to which he is affected by them. The Guides are probably the most widely used measures of personality in Great Britain. This is for children aged 5 to 15.

Rock-A-Bye, Baby: A Group Projective Test for Children: For groups of 9 to 16 children, aged 5 to 10, this test provides six scores: self-concept, jealousy index, aggression to parents, guilt index, anxiety index, and index to obsessive trends. Stimulus material is presented by a 35-minute 16 mm. film. An hour is needed to complete the test. No reliability data are available.

ASSESSMENT FOR "SPECIAL NEEDS" CHILDREN

The Cain-Levine Social Competency Scale: This battery of four scales is designed for use with moderately retarded or trainable retarded children aged 5 to 13, of an IQ range of 25 to 59. The four scales are Self-Help, Initiative, Social Skills, and Communication.

The Handicap Problems Inventory: This checklist was developed for use with the physically handicapped, age 16 and over, in order to provide an estimate of the impact of disability as the client feels it and is able to verbalize it. It is suggested here as a basis for modification in the development of checklist for younger children with various disabilities.

Attitude to Blindness Scale: This is a 30-item questionnaire designed to assess the attitudes of sighted adults toward the blind. It may be used with parents, teachers or other members of the community.

Attitude toward Disabled People Scale: There are two equivalent 30-item forms of this scale. The Scale attempts to measure attitudes toward disabled persons in general. Approximately half the items refer to similarities or differences in personality characteristics of disabled and non-disabled people, and the other half deal with the question of special treatment of the disabled. For disabled subjects, the score may represent an index of self-acceptance. For non-disabled subjects, such as parents, teachers or other community members, the score may represent the degree of acceptance of the disabled.

Illinois Test for Psycholinguistic Abilities, Experimental Edition: This test is appropriate for ages 2.5 to 9 and measures auditory-vocal automatic, visual decoding, motor encoding, audio-vocal association, visual motor sequencing, vocal encoding, auditory-vocal sequencing, visual motor association, and auditory decoding. It is an individual test.

Bender Visual Motor Gestault Test for Children: This test may be administered to persons aged 7-11 and can be completed in approximately ten minutes without associations. There is no data available on reliability and validity. Available through Aileen Clawson, Western Psychological Services.

Sabatino Test of Audio Perception: (in development).

ATTITUDE

Parents' Judgement Regarding a Particular Child: This is a 35-item scale which is designed to discover the qualities in children which satisfy or dissatisfy their parents.

The Minnesota Teacher Attitude Inventory: The instrument consists of a series of items related to attitudes of teachers toward pupil-teacher relations. It may be used with both elementary and secondary school teachers and can be administered in 20 to 30 minutes.

Opinionnaire on Attitudes Toward Education: This is a 50-item scale which may be used with teachers, parents, and other appropriate subjects in the school and community. The statements are concerned with the desirability of understanding the behavior of students, the desirability of the teacher's use of authoritarian methods of controlling the behavior of the students, and the desirability of subject-matter emphasis as contrasted with child-centeredness.

Additional work will be required to develop a home environment rating scale if the Bristol Social Adjustment Guide is not used. Information methods of evaluation, such as interviews with parents, school personnel, and members of the community will be employed and will require the development of interview schedules. Observation methods will be needed, as well as clerical procedures to collect the following data: school retention rates, attendance, truancy and delinquency rates, student use of supporting services, teacher turnover rates, and return and retention of dropouts.

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APPENDIX XIII

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